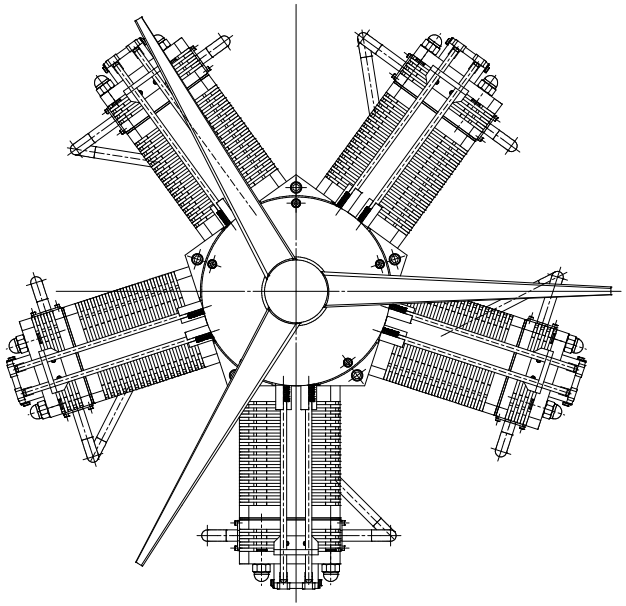
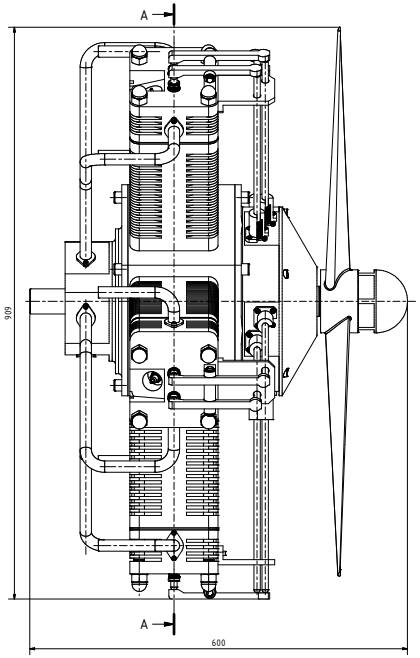
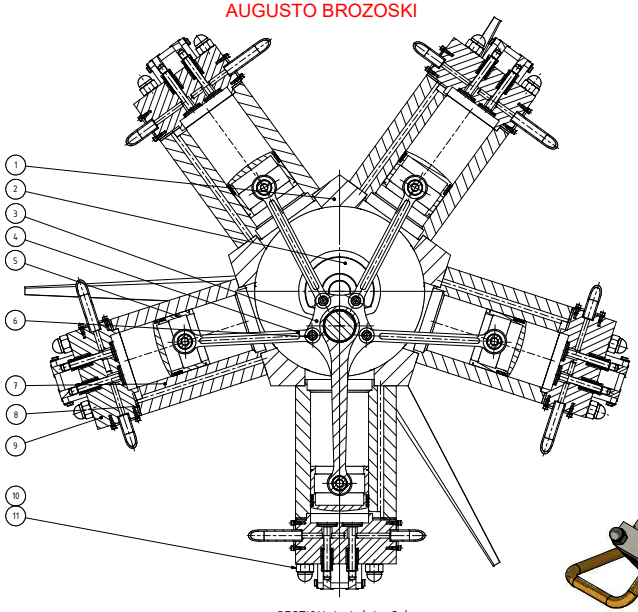


FRONT VIEW (1 : 3)



LEFT VIEW (1 : 3)

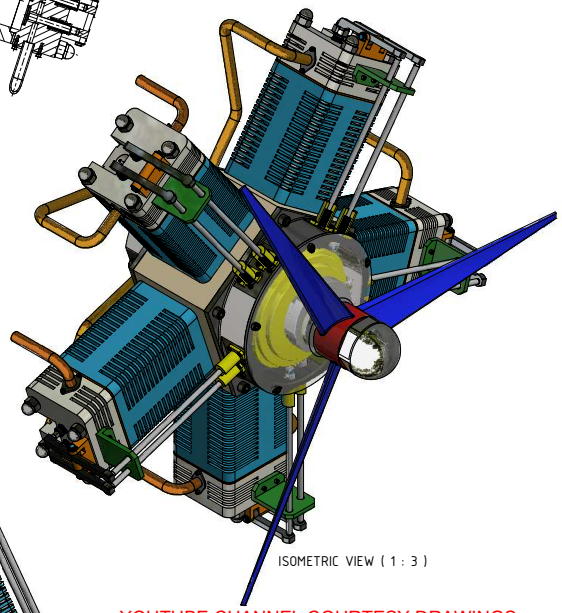
YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



SECTION A-A (1 : 3)

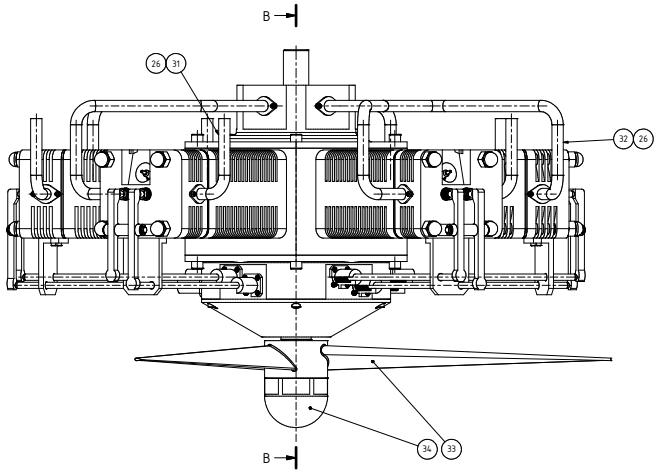
YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



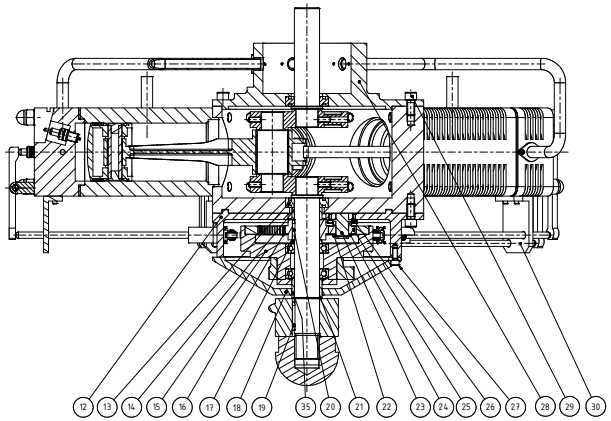
ISOMETRIC VIEW (1 : 3)

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



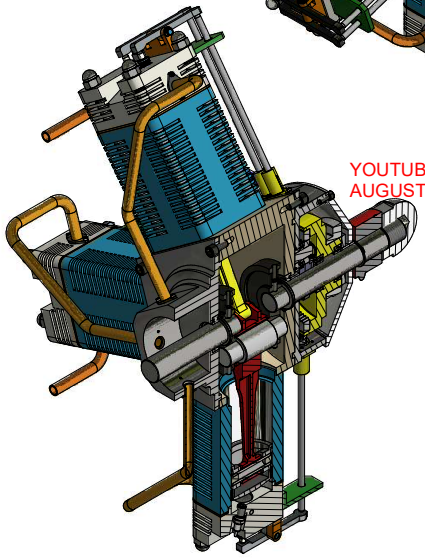
TOP VIEW (1 : 3)

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



SECTION B-B (1 : 3)

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



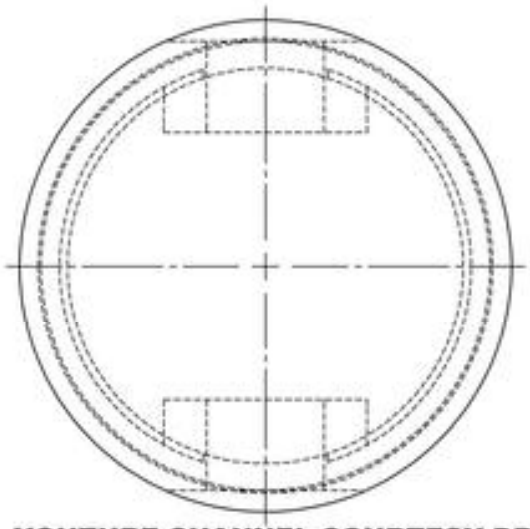
SECTION B-B ISOMETRIC VIEW
(1 : 3)

PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	CRANKCASE	
2	1	CRANKSHAFT ASSEMBLY	
3	1	MASTER ROAD WITH BUSHING	
4	4	CONECTED ROD WITH BUSHING	
5	5	PISTON ASSEMBLY	
6	4	LINK PIN	
7	5	CYLINDER	
8	5	CYLINDER HEAD GASKET	
9	5	CYLINDER HEAD ASSEMBLY	
10	20	DIN 835 - M16 x 320	
11	20	DIN 1587 - M16	Hexagon Domed Cap Nuts
12	1	CAME HOUSING	
13	2	DIN 625 SKF - SKF 6008	Single row ball bearings SKF
14	1	SPACE RING DIAM 48 X 19-5	
15	1	CAME ASSEMBLY	
16	1	CENTRAL GEAR 39 TEETH	
17	1	SPACE RING DIAM 48 X 6	
18	1	FRONT COVER	
19	1	DIN 6885 - A 12 x 8 x 45	Parallel Key
20	1	DIN 6885 - A 12 x 8 x 32	Parallel Key
21	1	DIN 471 - 40 x 1,75(1)	Spring Retaining Ring
22	1	DIN 471 - 20 x 1,2	Spring Retaining Ring
23	1	INTERMEDIATE GEAR SHAFT	
24	1	SPECIAL WASHER DIAM 20	
25	1	INTERMEDIATE GEAR 25 TEETH	
26	74	DIN 912 - M4 x 10	Cylinder Head Cap Screw
27	5	DIN 912 - M8 x 20	Cylinder Head Cap Screw
28	1	COVER CRANKCASE	
29	10	DIN 912 - M12 x 25	Cylinder Head Cap Screw
30	5	ROLLER FOLLOWER ASSEMBLY CAM	
31	5	EXAUST PIPE	
32	5	INTAKE TUBE	
33	1	PROPELLER 3 BLADES	
34	1	SPINNER NUT	
35	1	SPACE RING DIAM 48 X 30-65	

DESIGN FOR EDUCACIONAL USE ONLY

				Date	Name	RADIAL ENGINE ASSEMBLY
				Drawn	02/05/2020	Augusto
				Checked		
				Qa Mgr		
				Comments		
Marks	Changes	Date	Name			1
						A0

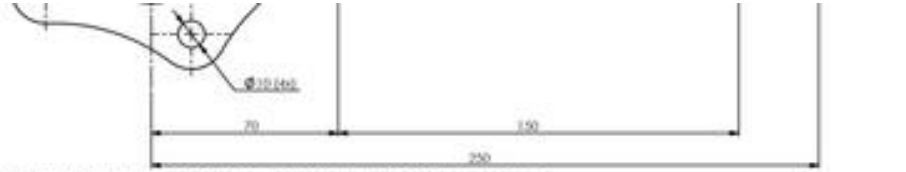


YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

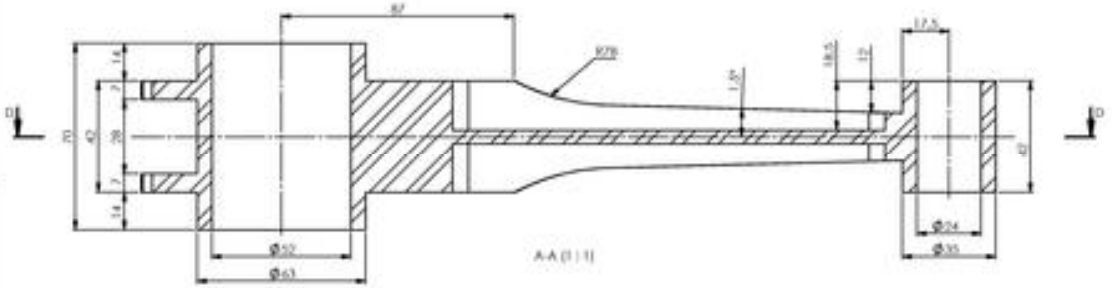
YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

DESIGN FOR EDUCACIONAL USE ONLY

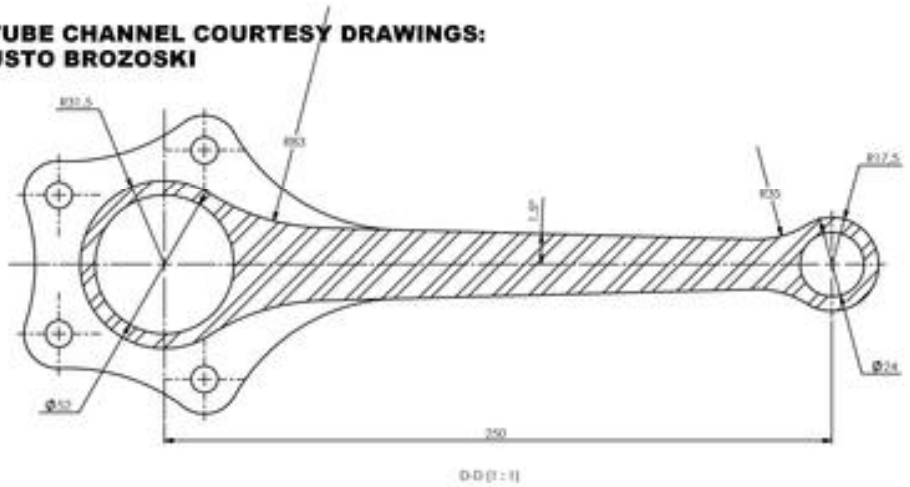
SE NÃO ESPECIFICADO: DIMENSÕES EM MILÍMETROS ACABAM. SUPERFÍCIE: TOLERÂNCIAS: LINEAR: ANGULAR:		ACABAMENTO:		REBARBAR E QUEBRAR ARESTAS AGUDAS		NÃO MUDAR ESCALA DO DESENHO	REVISÃO
	NOME	ASSINATURA	DATA			TÍTULO: RADIAL ENGINE	
DESEN.	AUGUSTO BROZOSKI						
VERIF.							
APROV.							
MANUF.							
QUALID.				MATERIAL:		DES. Nº 01 - PISTON	A3
				PESO:		ESCALA 1:2	FOLHA 1 DE 1



YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

DESIGN FOR EDUCACIONAL USE ONLY

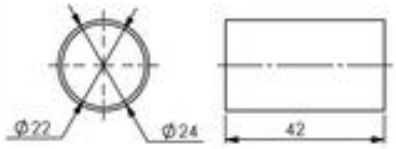
RADIAL ENGINE

E-E (1 : 1)

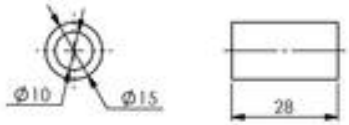
YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

DESIGN FOR EDUCACIONAL USE ONLY

SE NÃO ESPECIFICADO: DIMENSÕES EM MILÍMETROS ACABAM. SUPERFÍCIE: TOLERÂNCIAS: LINEAR: ANGULAR:		ACABAMENTO:		REBARBAR E QUEBRAR ARESTAS AGUDAS	NÃO MUDAR ESCALA DO DESENHO	REVISÃO	
	NOME	ASSINATURA	DATA		TÍTULO: RADIAL ENGINE		
DESEN.	AUGUSTO BROZOSKI						
VERIF.							
APROV.							
MANUF.							
QUALID.							
				MATERIAL:	DES. Nº 03 - CONNECTED ROD		A3
				PESO:	ESCALA 1:2	FOLHA 1 DE 1	

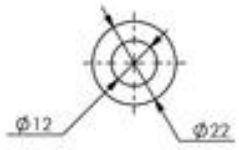


UPPER ROD BUSHING



LOWER ROD BUSHING

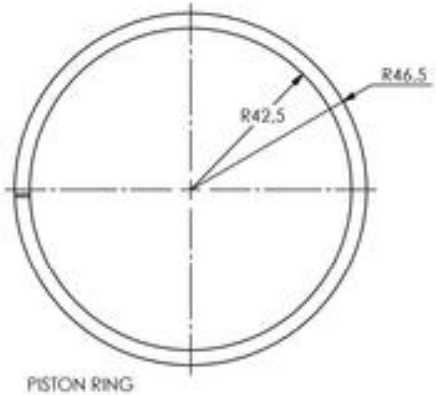
YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



PISTON PIN

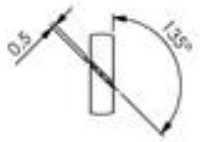
YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

MASTER ROD BUSHING



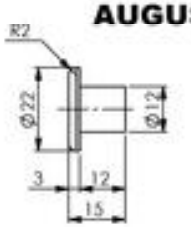
PISTON RING

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

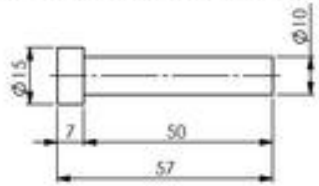


F (2 : 1)

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



PISTON PLUG



LINK PIN

DESIGN FOR EDUCACIONAL USE ONLY

RADIAL ENGINE

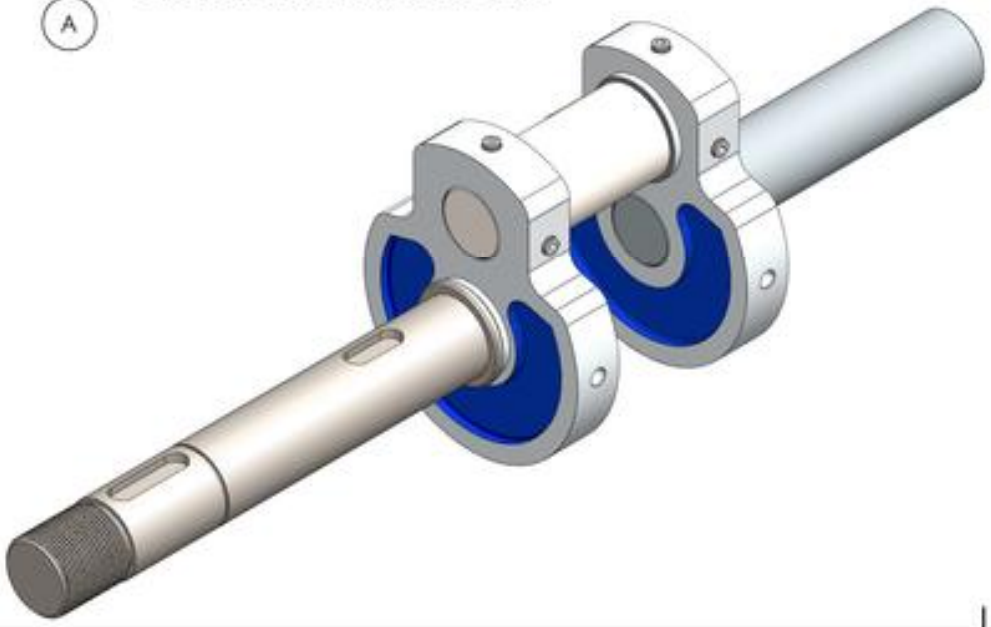
04 - PISTON PARTS

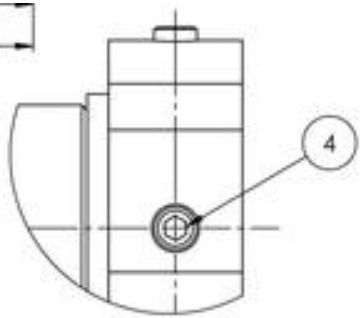
A2

558

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

A



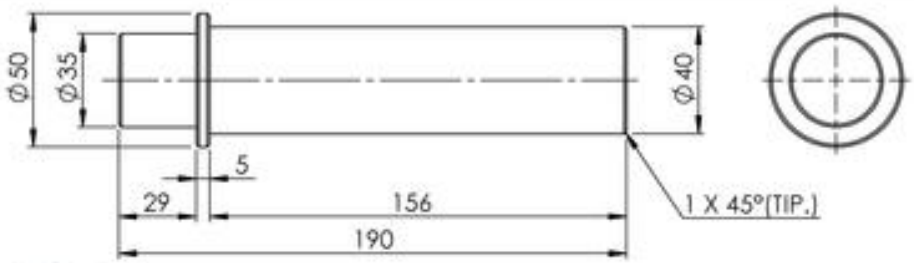


DETALHE A
ESCALA 1:1

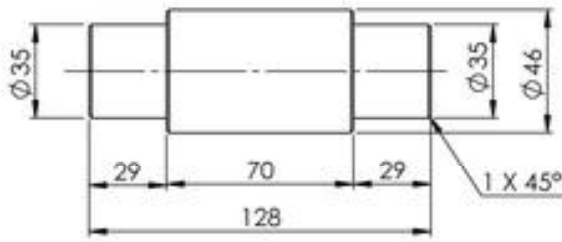
DESIGN FOR EDUCACIONAL USE ONLY

SE NÃO ESPECIFICADO: DIMENSÕES EM MILÍMETROS ACABAM. SUPERFÍCIE: TOLERÂNCIAS: LINEAR: ANGULAR:		ACABAMENTO:		REBARBAR E QUEBRAR ARESTAS AGUDAS	NÃO MUDAR ESCALA DO DESENHO	REVISÃO A	
	NOME	ASSINATURA	DATA		TÍTULO: RADIAL ENGINE		
DESEN.	AUGUSTO BROZOSKI						
VERIF.							
APROV.							
MANUF.							
QUALID.							
				MATERIAL:	DES. Nº 05 - CRANKSHAFT ASSEMBLY		A3
				PESO:	ESCALA 1:2	FOLHA 1 DE 1	

ZONE	REV.	DESCRIPTION	DATE	APPROVED
D4, E1	A	REDIMENSION SHAFT	06/11/2019	

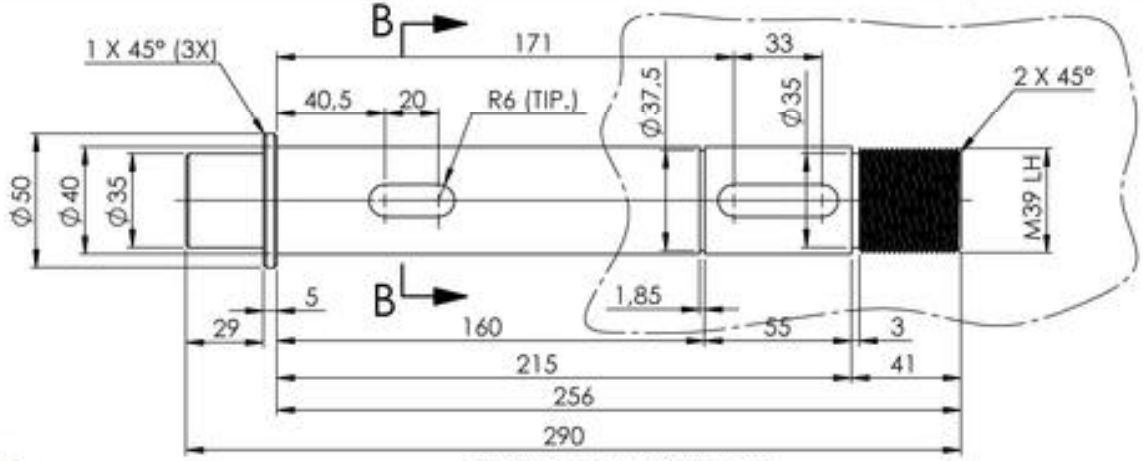


REAR CRANCKSHAFT

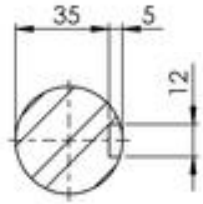


CRANKSHAFT PIN

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



FRONT CRANKSHAFT



SEÇÃO B-B
ESCALA 1 : 2

DESIGN FOR EDUCACIONAL USE ONLY

SE NÃO ESPECIFICADO: DIMENSÕES EM MILÍMETROS ACABAM. SUPERFÍCIE: TOLERÂNCIAS: LINEAR: ANGULAR:	ACABAMENTO:	REBARBAR E QUEBRAR ARESTAS AGUDAS	NÃO MUDAR ESCALA DO DESENHO	REVISÃO A

	NOME	ASSINATURA	DATA
DESEN.	AUGUSTO BROZOSKI		
VERIF.			
APROV.			
MANUF.			
QUALID.			

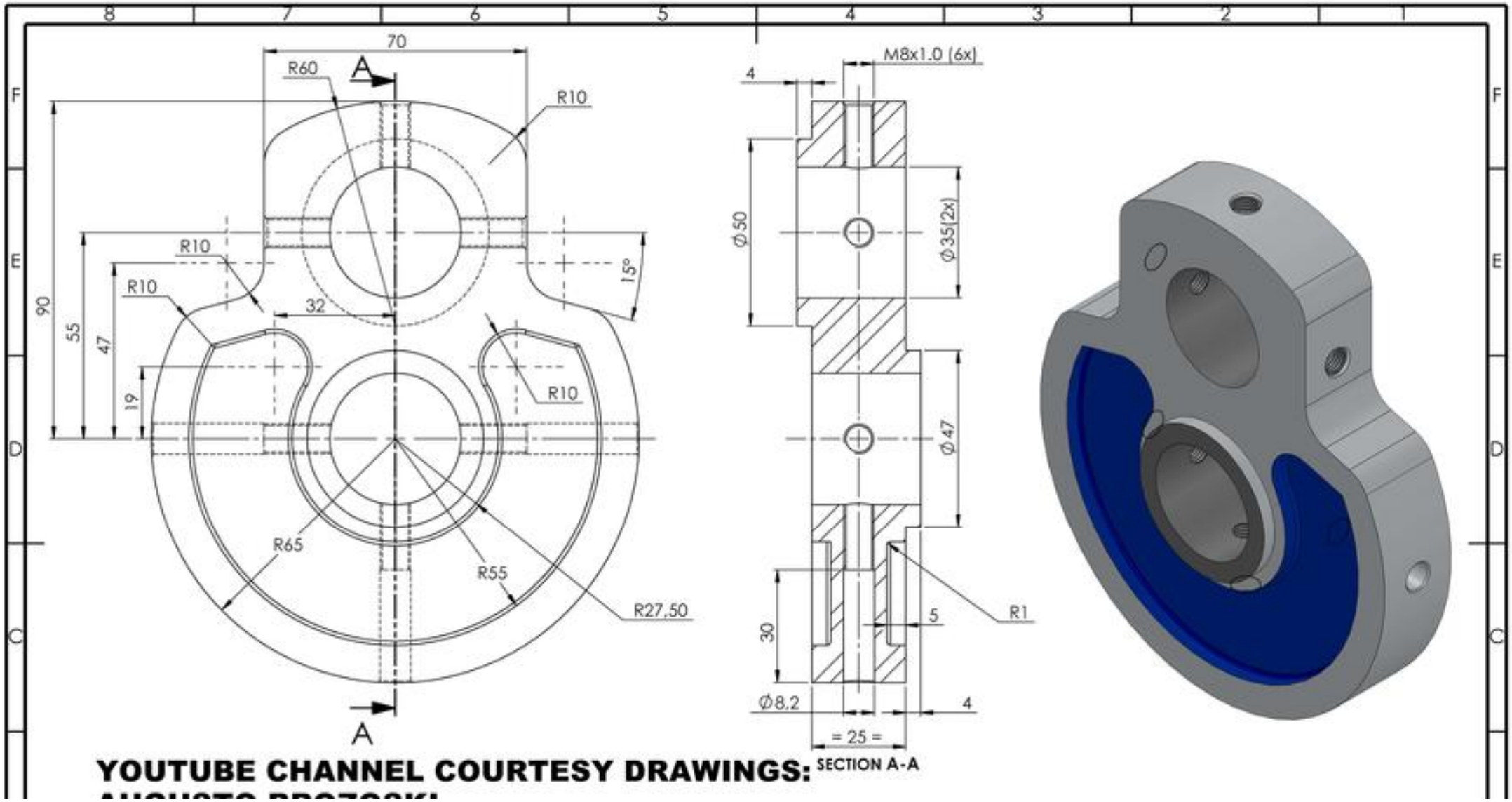
TÍTULO:
RADIAL ENGINE

MATERIAL: AISI 4130 Aço, normalizado a 870C

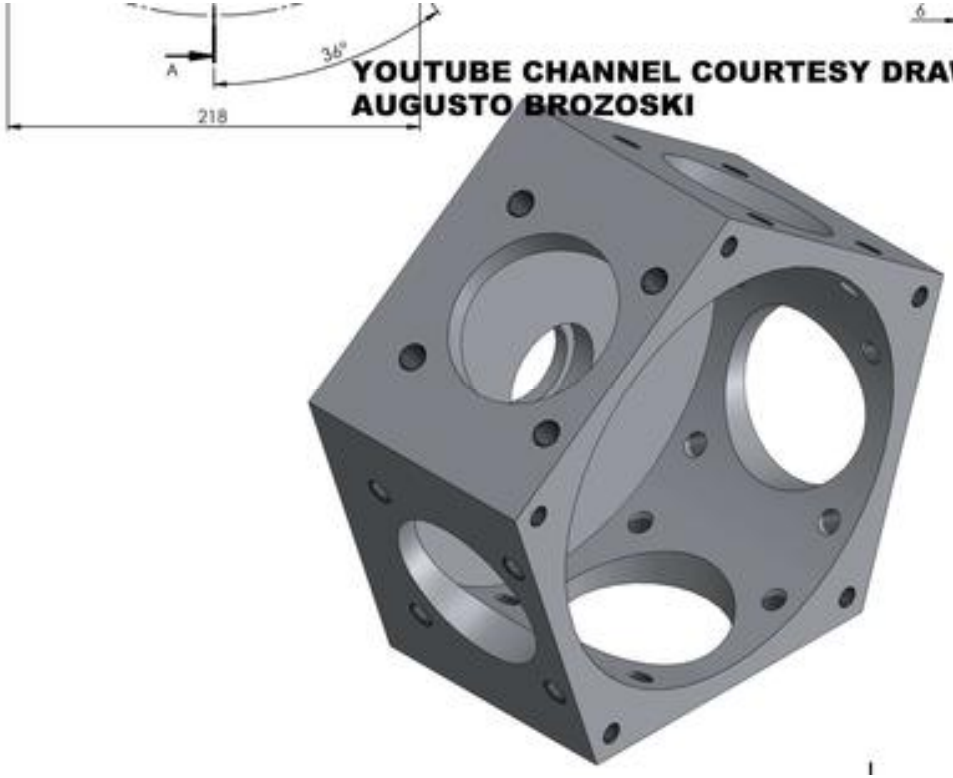
DES. Nº 06 - CRANKSHAFT AXLES

A3

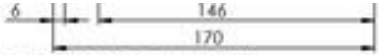
PESO: ESCALA:1:2 FOLHA 1 DE 1

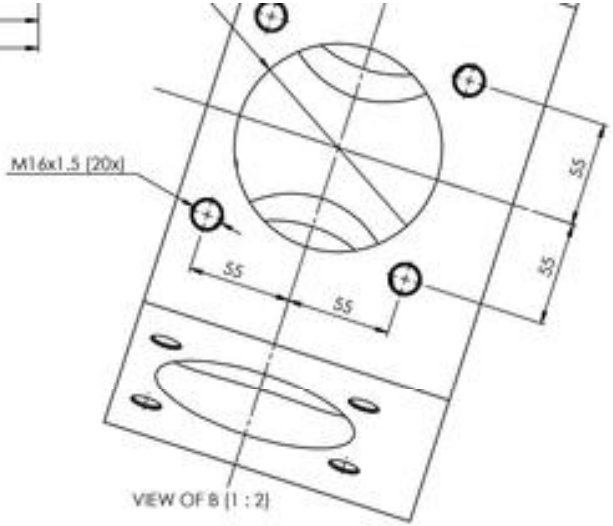


YOUTUBE CHANNEL COURTESY DRAWINGS:



YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



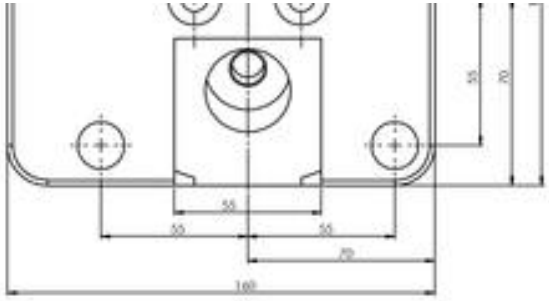


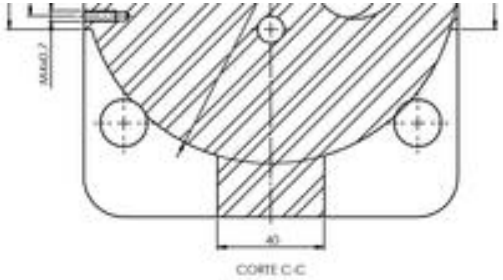
DESIGN FOR EDUCACIONAL USE ONLY

RADIAL ENGINE

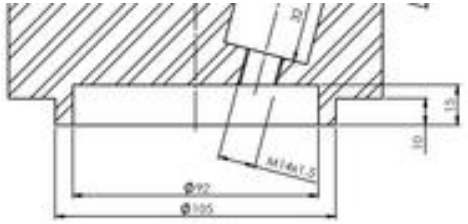
08 - CRANCKCASE

A2



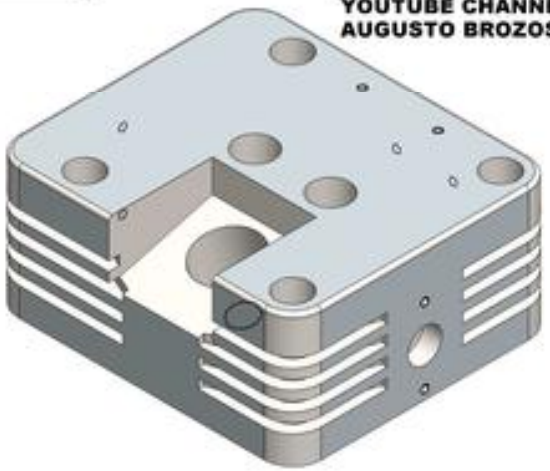


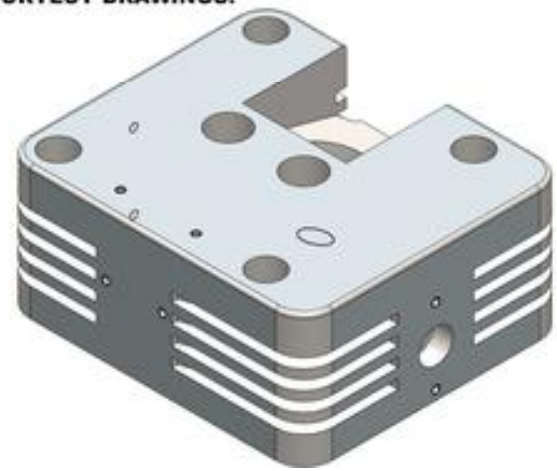
CORTE C-C



CORTE A-A

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

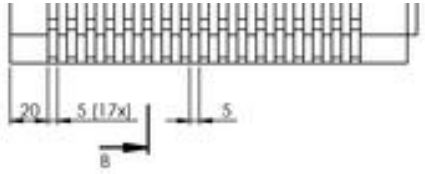


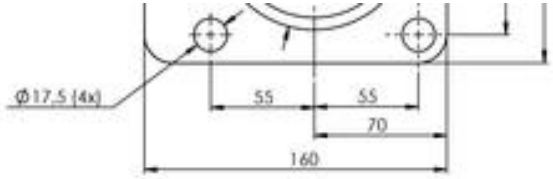


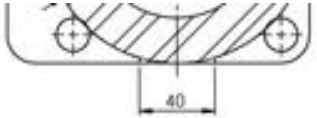
DESIGN FOR EDUCACIONAL USE ONLY

RADIAL ENGINE

10 - CYLINDER HEAD

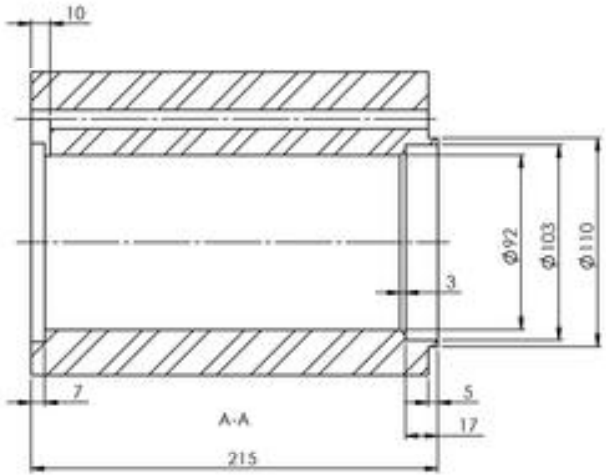




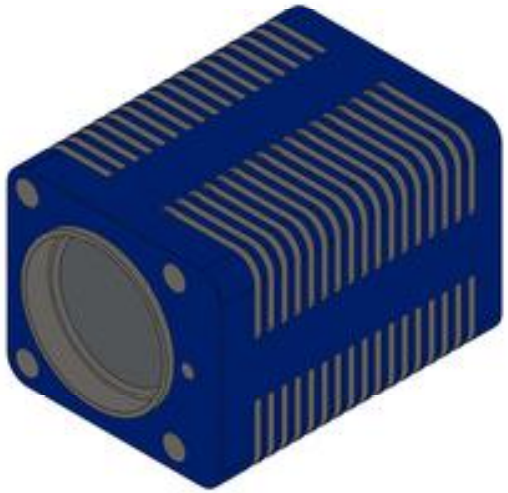


B-B
(ALIVIO)

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



A-A



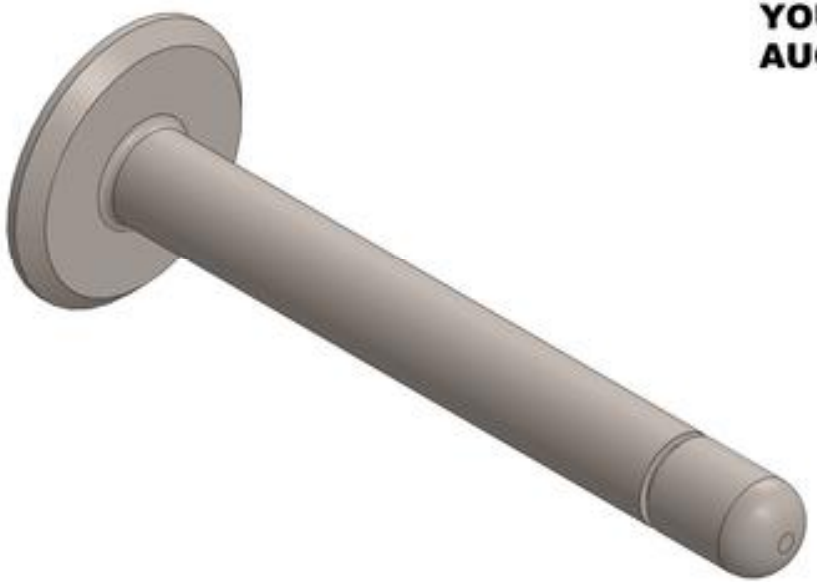
DESIGN FOR EDUCACIONAL USE ONLY

RADIAL ENGINE

11 - CYLINDER

A2

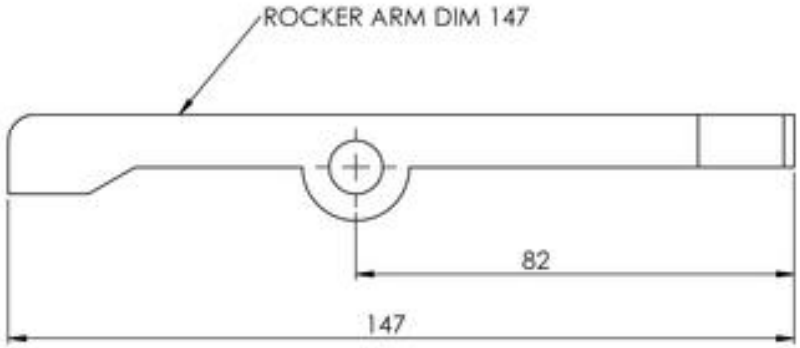
YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

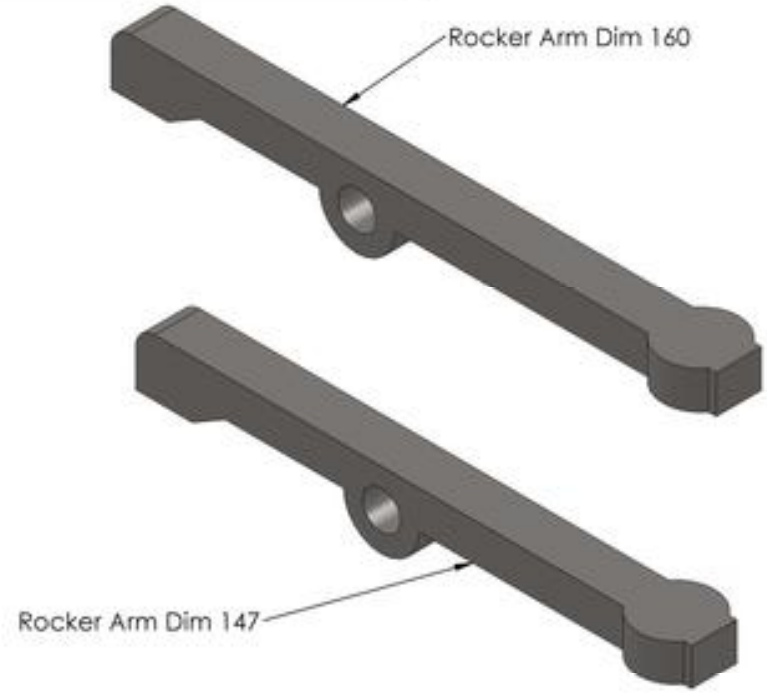


DESIGN FOR EDUCACIONAL USE ONLY

SE NÃO ESPECIFICADO: DIMENSÕES EM MILÍMETROS ACABAM. SUPERFÍCIE: TOLERÂNCIAS: LINEAR: ANGULAR:	ACABAMENTO:	REBARBAR E QUEBRAR ARESTAS AGUDAS	NÃO MUDAR ESCALA DO DESENHO	REVISÃO			
	NOME	ASSINATURA	DATA				TÍTULO: RADIAL ENGINE
DESEN.	AUGUSTO BROZOSKI						
VERIF.							
APROV.							
MANUF.							
QUALID.				MATERIAL: AISI AÇO INOXIDÁVEL TIPO 316			DES. Nº 11 - VALVE
							A3
				PESO:		ESCALA 1:1	FOLHA 1 DE 1

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI





DESIGN FOR EDUCACIONAL USE ONLY

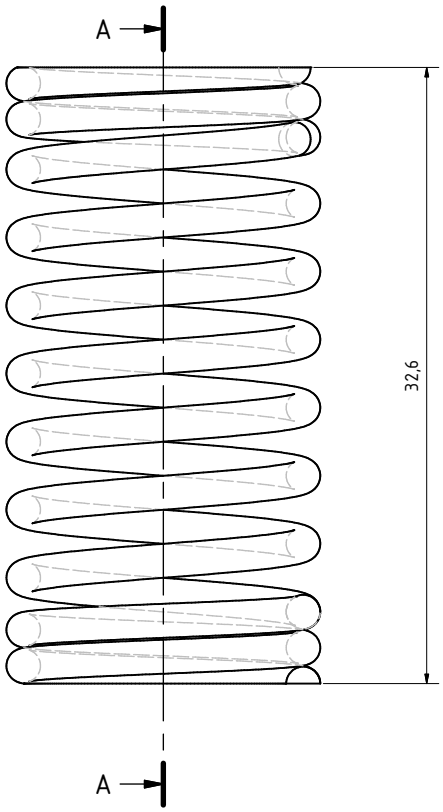
SE NÃO ESPECIFICADO: DIMENSÕES EM MILÍMETROS ACABAM. SUPERFÍCIE: TOLERÂNCIAS: LINEAR: ANGULAR:	ACABAMENTO:	REBARBAR E QUEBRAR ARESTAS AGUDAS	NÃO MUDAR ESCALA DO DESENHO	REVISÃO		
	NOME	ASSINATURA	DATA	TÍTULO: RADIAL ENGINE		
DESEN.	AUGUSTO BROZOSKI					
VERIF.						
APROV.						
MANUF.						
QUALID.						
				MATERIAL: AISI 1035 Steel (SS)	DES. Nº 14 - ROCKER ARM	A3
				PESO:	ESCALA: 1:1	FOLHA 1 DE 1

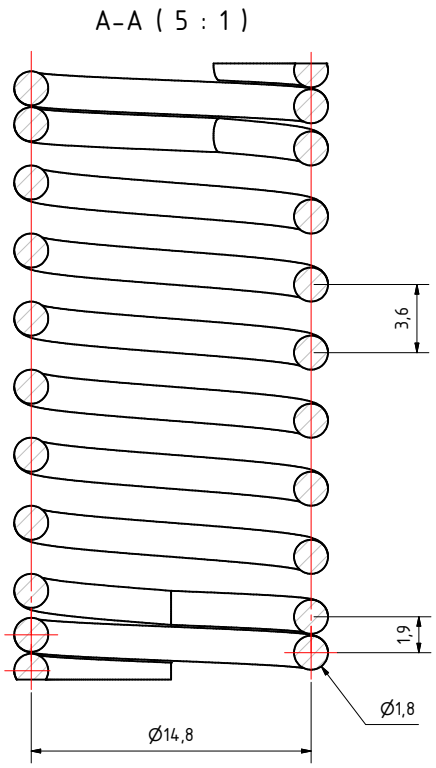
SEÇÃO A-A

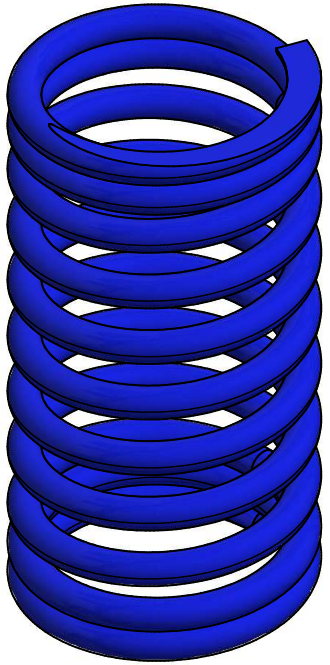
YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

DESIGN FOR EDUCACIONAL USE ONLY

SE NÃO ESPECIFICADO: DIMENSÕES EM MILÍMETROS ACABAM. SUPERFÍCIE: TOLERÂNCIAS: LINEAR: ANGULAR:	ACABAMENTO:				REBARBAR E QUEBRAR ARESTAS AGUDAS	NÃO MUDAR ESCALA DO DESENHO / REVISÃO
	NOME	ASSINATURA	DATA			TÍTULO: RADIAL ENGINE
DESEN.	AUGUSTO BROZOSKI					
VERIF.						
APROV.						
MANUF.						
QUALID.				MATERIAL: AISI 1020		DES. Nº 13 - UPPER COLLAR / A4
				PESO:	ESCALA:2:1	FOLHA 1 DE 1





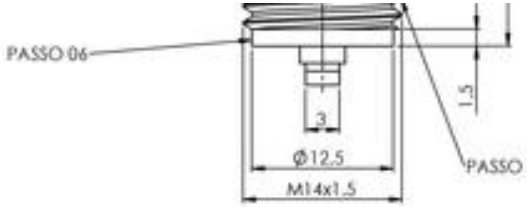


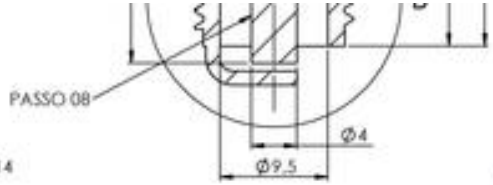
					Date	Name	
				Drawn	07/04/2017	AugustoBro	
				Checked			
				Standard			
						MOLA RETIFICADA	1
State	Changes	Date	Name				A2

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

DESIGN FOR EDUCACIONAL USE ONLY

SE NÃO ESPECIFICADO: DIMENSÕES EM MILÍMETROS ACABAM. SUPERFÍCIE: TOLERÂNCIAS: LINEAR: ANGULAR:	ACABAMENTO:				REBARBAR E QUEBRAR ARESTAS AGUDAS	NÃO MUDAR ESCALA DO DESENHO / REVISÃO
	NOME	ASSINATURA	DATA			TÍTULO: RADIAL ENGINE
DESEN.	AUGUSTO BROZOSKI					
VERIF.						
APROV.						
MANUF.						
QUALID.				MATERIAL: AISI 304		DES. Nº 15 - ROCKER BRACKET PIN / A4
				PESO:		ESCALA:1:1 / FOLHA 1 DE 1

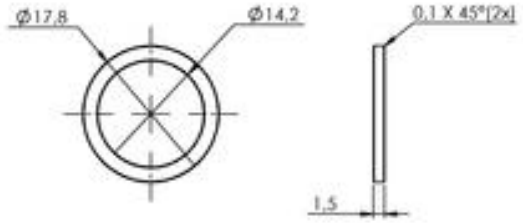


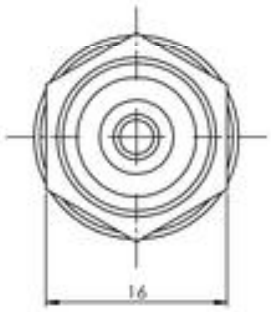


SEÇÃO A-A

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

A





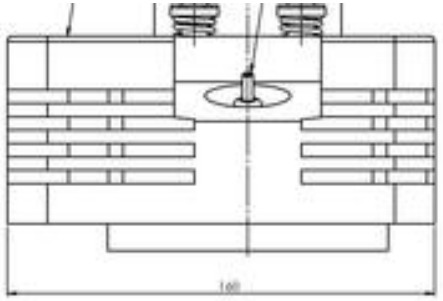
YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

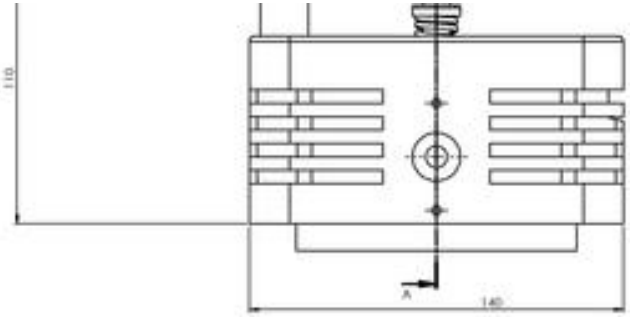
DESIGN FOR EDUCACIONAL USE ONLY

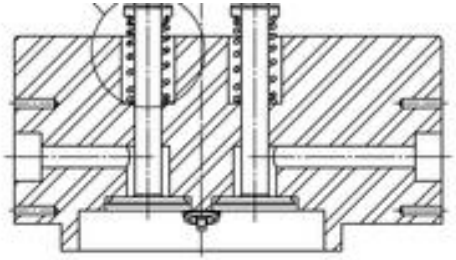
RADIAL ENGINE

17 - SPARK PLUG

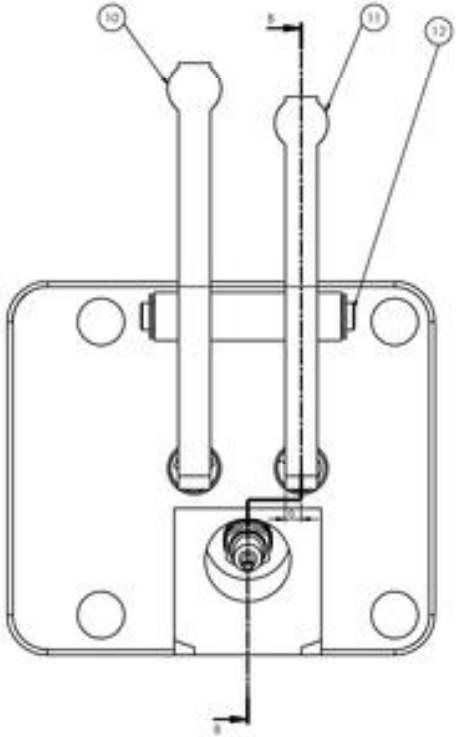
A2



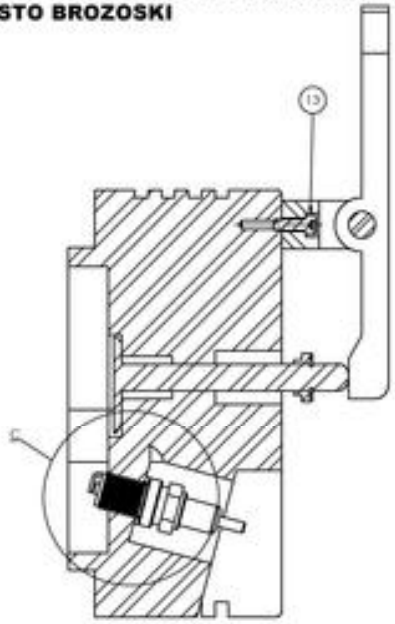




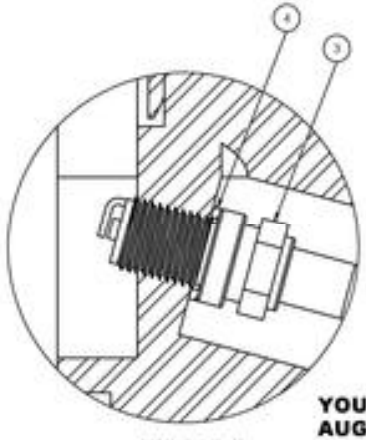
CORTE A-A



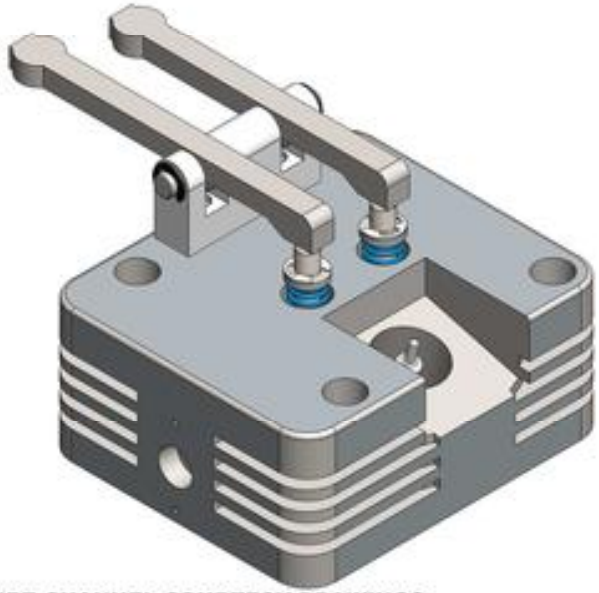
YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



CORTE B-B



DETALHE C (2 : 1)

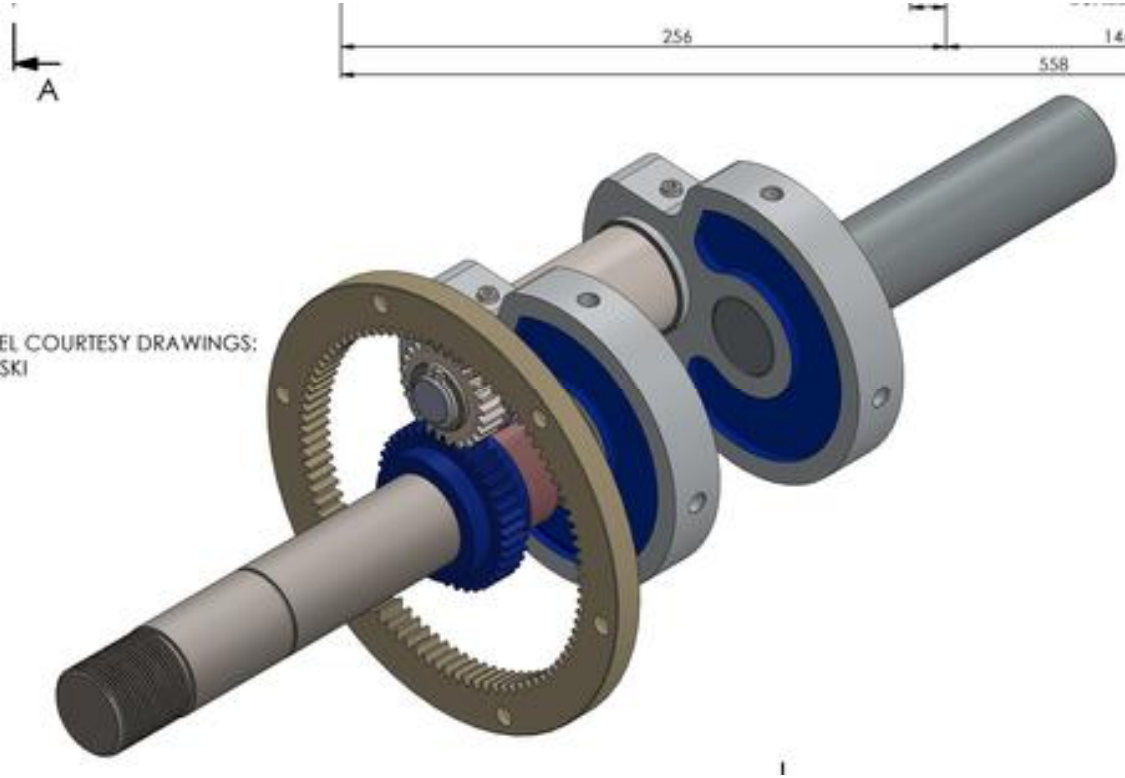


YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

DESIGN FOR EDUCACIONAL USE ONLY

RADIAL ENGINE

16 - CYLINDER HEAD ASSEMBLY



YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

DESIGN FOR EDUCACIONAL USE ONLY

RADIAL ENGINE

19 - GEAR ASSEMBLY

A2

MÓDULO = 1,75 **MODULE = 1.75**
ÂNGULO DE PRESSÃO = 20° **PRESSURE ANGLE = 20°**

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

DESIGN FOR EDUCACIONAL USE ONLY

SE NÃO ESPECIFICADO: DIMENSÕES EM MILÍMETROS ACABAM. SUPERFÍCIE: TOLERÂNCIAS: LINEAR: ANGULAR:	ACABAMENTO:			REBARBAR E QUEBRAR ARESTAS AGUDAS	NÃO MUDAR ESCALA DO DESENHO	REVISÃO	
	NOME	ASSINATURA	DATA		TÍTULO: RADIAL ENGINE		
DESEN.	AUGUSTO BROZOSKI						
VERIF.							
APROV.							
MANUF.							
QUALID.							
				MATERIAL:	DES. Nº 20 - CENTRAL GEAR 39		A3
				PESO:	ESCALA: 1:1	FOLHA 1 DE 1	

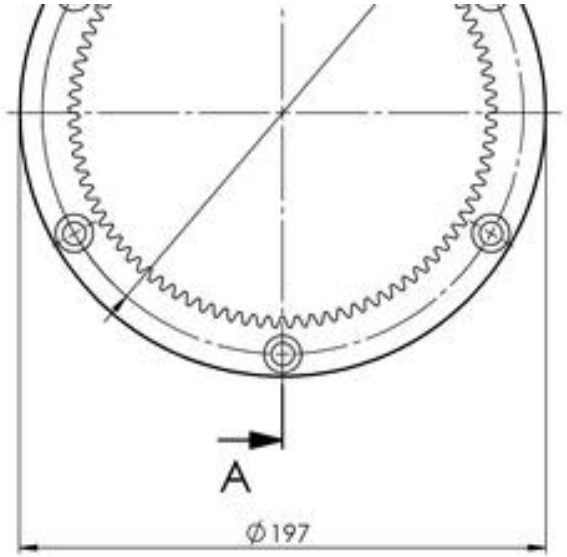
MÓDULO = 1,75
ÂNGULO DE PRESSÃO = 20°

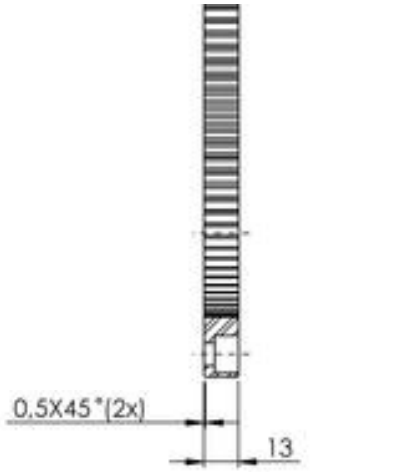
MODULE = 1.75
PRESSURE ANGLE = 20°

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

DESIGN FOR EDUCACIONAL USE ONLY

SE NÃO ESPECIFICADO: DIMENSÕES EM MILÍMETROS ACABAM. SUPERFÍCIE: TOLERÂNCIAS: LINEAR: ANGULAR:	ACABAMENTO:			REBARBAR E QUEBRAR ARESTAS AGUDAS	NÃO MUDAR ESCALA DO DESENHO	REVISÃO	
	NOME	ASSINATURA	DATA		TÍTULO: RADIAL ENGINE		
DESEN.	AUGUSTO BROZOSKI						
VERIF.							
APROV.							
MANUF.							
QUALID.							
				MATERIAL:	DES. Nº 21 - INTERMEDIATE GEAR 25 TEETH		A3
				PESO:	ESCALA 2:1	FOLHA 1 DE 1	





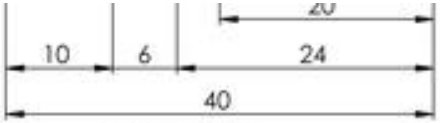
SECÇÃO A-A

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

NÚMERO DENTES = 89 **NUMBER TEETH = 89**

A

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



SEçãO A-A

ESCALA 2 : 1

DESIGN FOR EDUCACIONAL USE ONLY

SE NÃO ESPECIFICADO: DIMENSÕES EM MILÍMETROS ACABAM. SUPERFÍCIE: TOLERÂNCIAS: LINEAR: ANGULAR:	ACABAMENTO:	REBARBAR E QUEBRAR ARESTAS AGUDAS	NÃO MUDAR ESCALA DO DESENHO	REVISÃO			
	NOME	ASSINATURA	DATA				TÍTULO: RADIAL ENGINE
DESEN.	AUGUSTO BROZOSKI						
VERIF.							
APROV.							
MANUF.							
QUALID.				MATERIAL:			DES. Nº 23 - INTERMEDIATE GEAR SHAFT
							A3
				PESO:			ESCALA:1:1 FOLHA 1 DE 1

A

19,50

SEçãO A-A

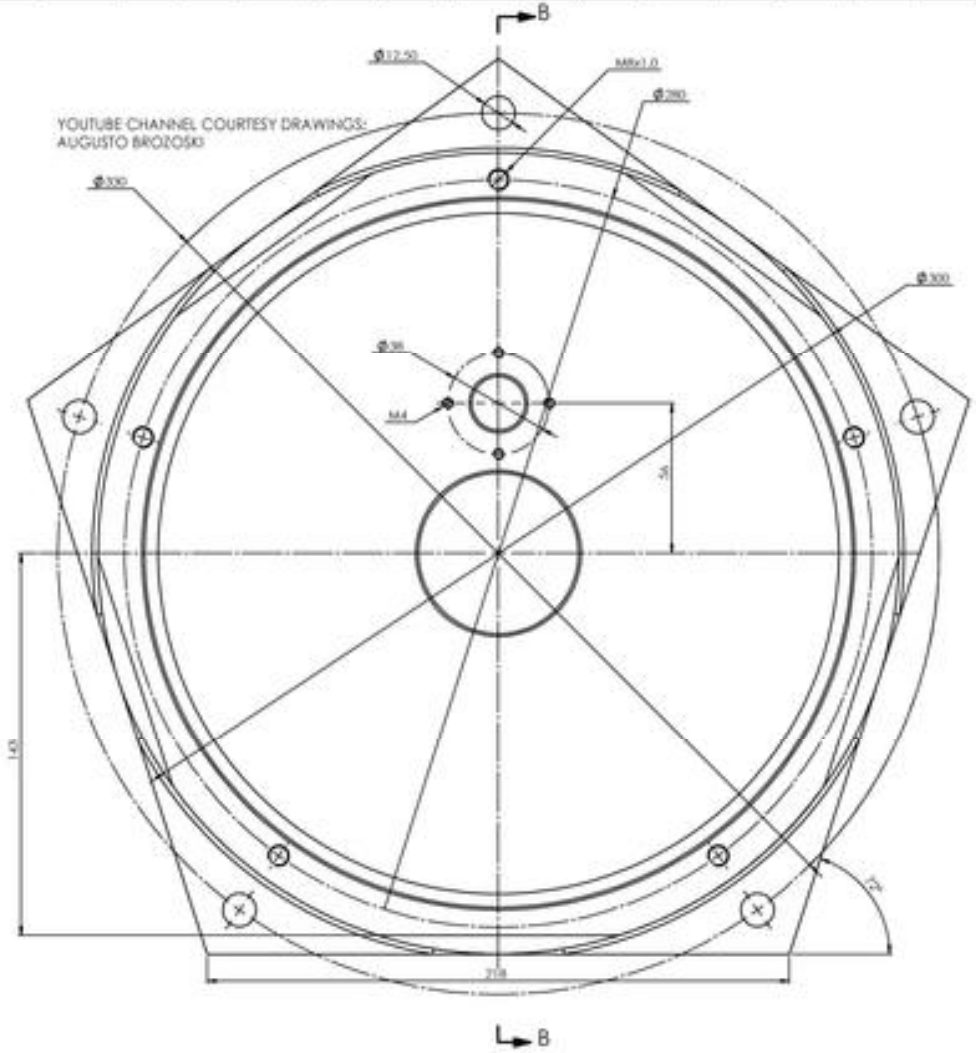
DESIGN FOR EDUCACIONAL USE ONLY

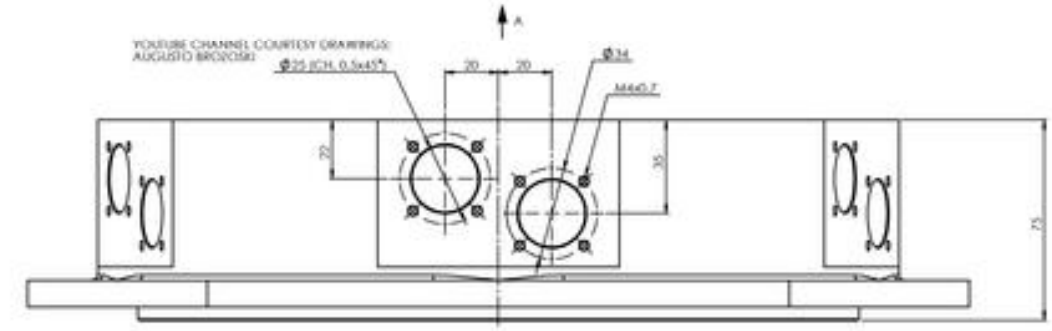
SE NÃO ESPECIFICADO: DIMENSÕES EM MILÍMETROS ACABAM. SUPERFÍCIE: TOLERÂNCIAS: LINEAR: ANGULAR:		ACABAMENTO:		REBARBAR E QUEBRAR ARESTAS AGUDAS		NÃO MUDAR ESCALA DO DESENHO		REVISÃO
	NOME	ASSINATURA	DATA			TÍTULO: RADIAL ENGINE		
DESEN.	AUGUSTO BRISOLARI							
VERIF.								
APROV.								
MANUF.								
QUALID.				MATERIAL:		DES. Nº 24 - SPACING HOUSING 19,5		A3
				PESO:		ESCALA 2:1	FOLHA 1 DE 1	

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

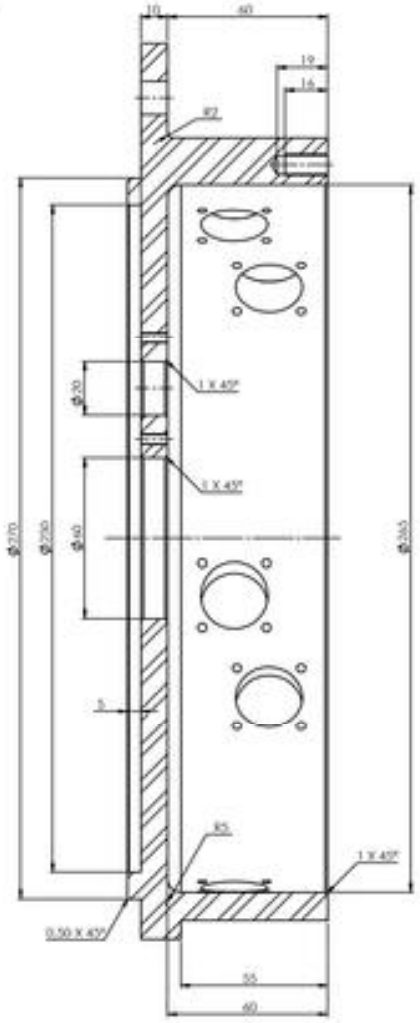
DESIGN FOR EDUCACIONAL USE ONLY

SE NÃO ESPECIFICADO: DIMENSÕES EM MILÍMETROS ACABAM. SUPERFÍCIE: TOLERÂNCIAS: LINEAR: ANGULAR:	ACABAMENTO:				REBARBAR E QUEBRAR ARESTAS AGUDAS	NÃO MUDAR ESCALA DO DESENHO	REVISÃO
	NOME	ASSINATURA	DATA			TÍTULO: RADIAL ENGINE	
DESEN.	AUGUSTO BROZOSKI						
VERIF.							
APROV.							
MANUF.							
QUALID.				MATERIAL:		DES. Nº 25 - SPECIAL WASHER DIAM 20	A3
				PESO:		ESCALA 2:1	FOLHA 1 DE 1





VISTA DE A
ESCALA 1 : 1



SEÇÃO B-B
ESCALA 1 : 1

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

VISTA ISOMETRICA
ESCALA 1:2

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

VISTA ISOMETRICA
ESCALA 1:2

DESIGN FOR EDUCACIONAL USE ONLY

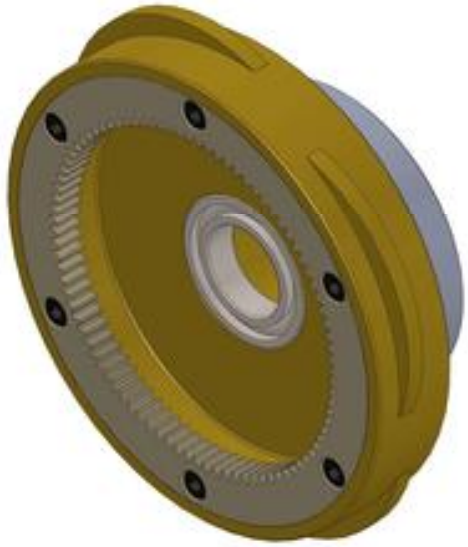
RADIAL ENGINE

26 - CAM HOUSE

A

SEçãO A-A
SCALE 1 : 1.5

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



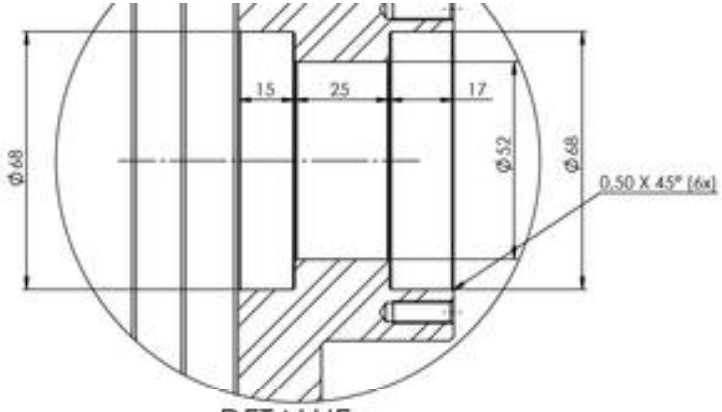
DESIGN FOR EDUCACIONAL USE ONLY

MOTOR RADIAL

27 - CAM ASSEMBLY

A2

AUGUSTO BROZOSKI



DETALHE D

ESCALA 1 : 1

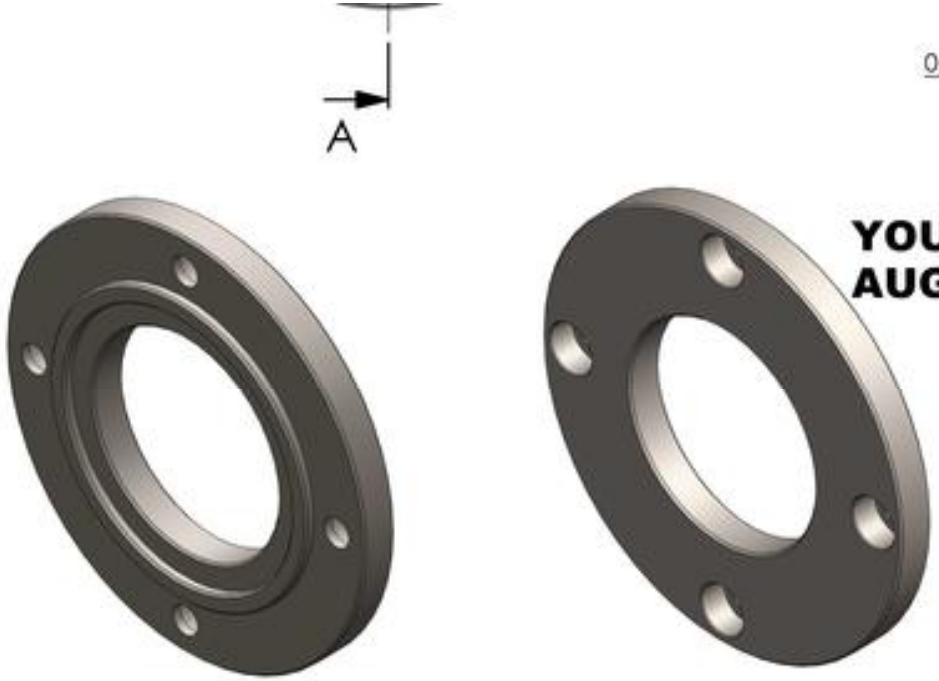
YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

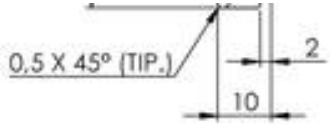
DESIGN FOR EDUCACIONAL USE ONLY

MOTOR RADIAL

28 - CAM WITH ECCENTRICS

A2





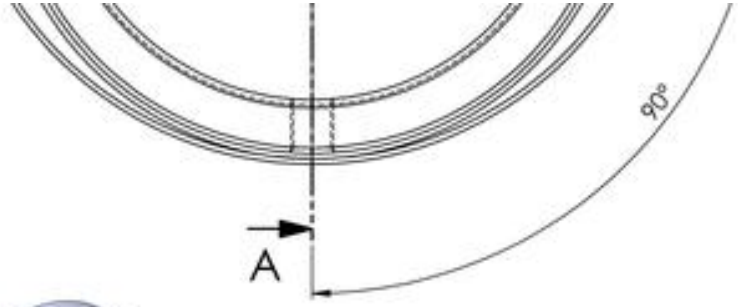
A

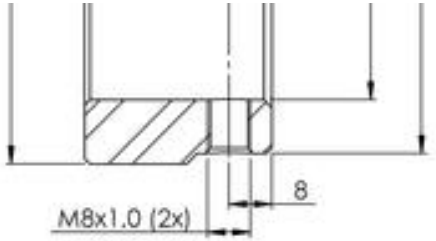
SEçãO A-A

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

DESIGN FOR EDUCACIONAL USE ONLY

SE NÃO ESPECIFICADO: DIMENSÕES EM MILÍMETROS ACABAM. SUPERFÍCIE: TOLERÂNCIAS: LINEAR: ANGULAR:	ACABAMENTO:			REBARBAR E QUEBRAR ARESTAS AGUDAS	NÃO MUDAR ESCALA DO DESENHO	REVISÃO: A	
	NOME	ASSINATURA	DATA		TÍTULO: RADIAL ENGINE		
DESEN.	AUGUSTO BROZOSKI						
VERIF.							
APROV.							
MANUF.							
QUALID.				MATERIAL:	DES. Nº 29 - COVER CAM		A3
				PESO:	ESCALA: 1:1	FOLHA 1 DE 1	





SEÇÃO A-A

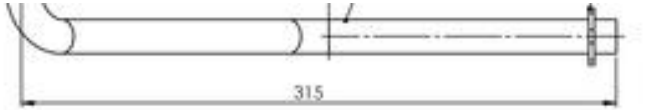
ESCALA 1 : 1

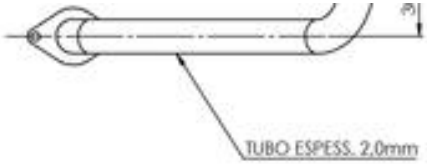
ISOMETRIC VIEW
SCALE 1:2

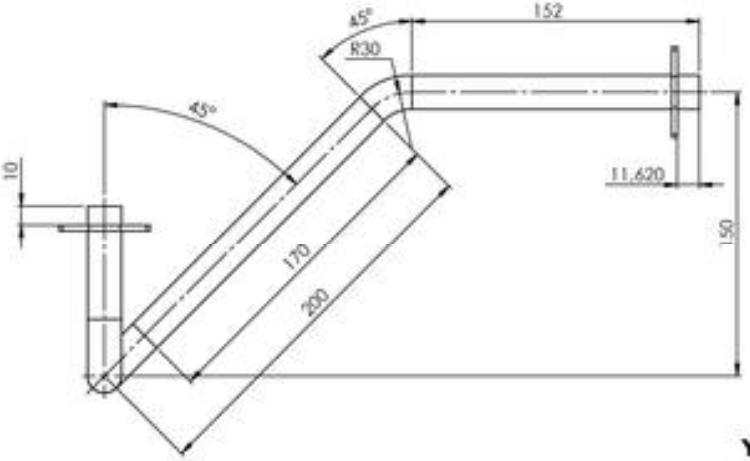
YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

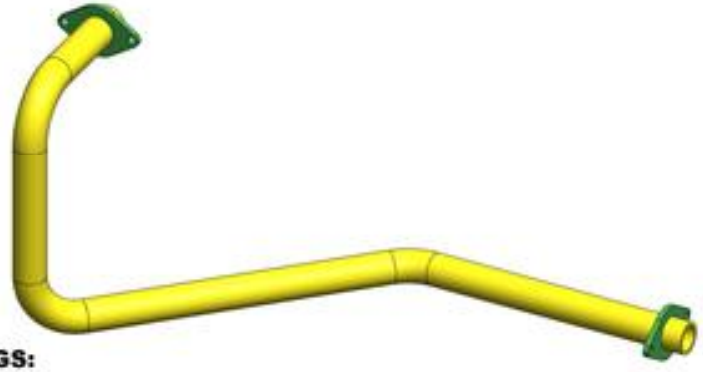
DESIGN FOR EDUCACIONAL USE ONLY

SE NÃO ESPECIFICADO: DIMENSÕES EM MILÍMETROS ACABAM. SUPERFÍCIE: TOLERÂNCIAS: LINEAR: ANGULAR:	ACABAMENTO:	REBARBAR E QUEBRAR ARESTAS AGUDAS	NÃO MUDAR ESCALA DO DESENHO	REVISÃO			
	NOME	ASSINATURA	DATA				TÍTULO: MOTOR RADIAL
DESEN.	AUGUSTO BROZOSKI						
VERIF.							
APROV.							
MANUF.							
QUALID.				MATERIAL:			DES. Nº 30 - CAM ECCENTRIC LUBRICATE
							A3
				PESO:			ESCALA:1:2 FOLHA 1 DE 1

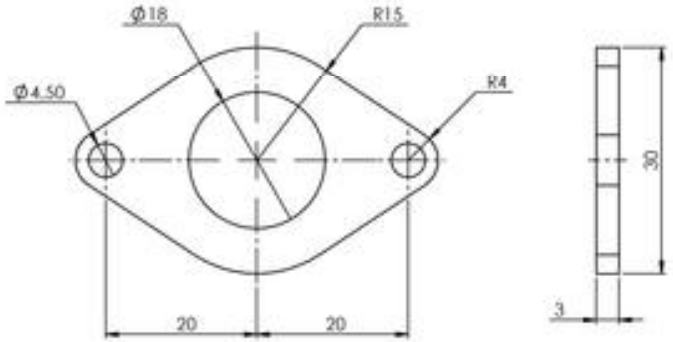








YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

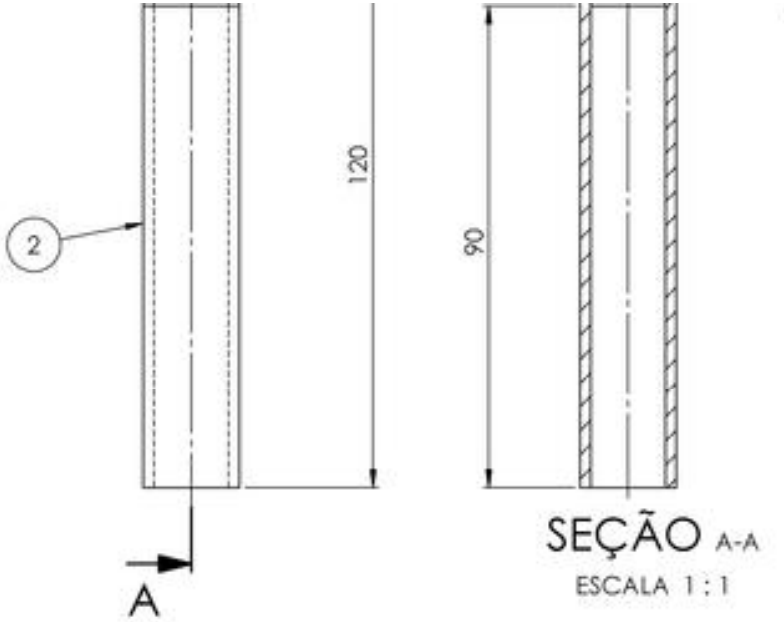


DESIGN FOR EDUCACIONAL USE ONLY

RADIAL ENGINE

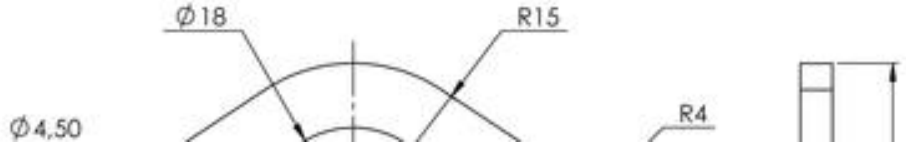
31 - INTAKE TUBE ASSEMBLY

A2

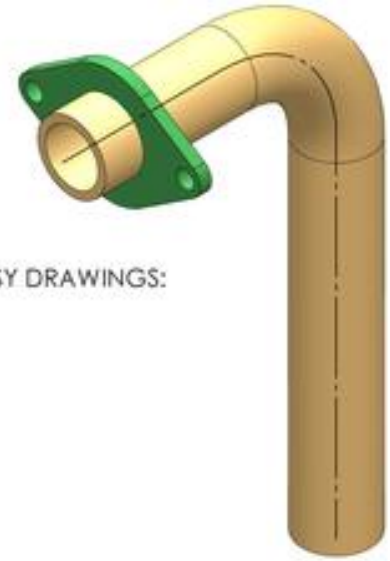


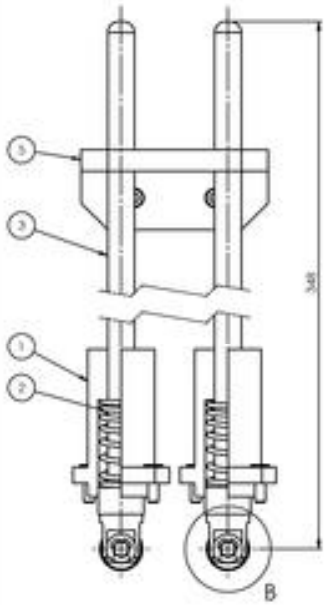
SEÇÃO A-A

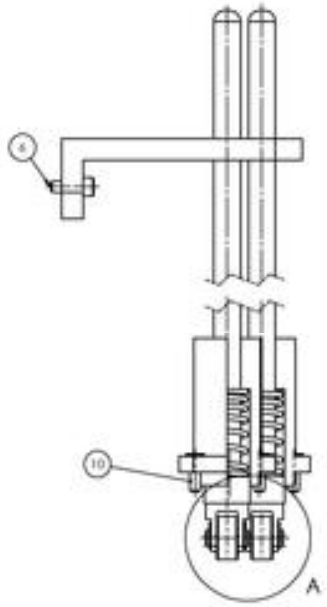
ESCALA 1 : 1



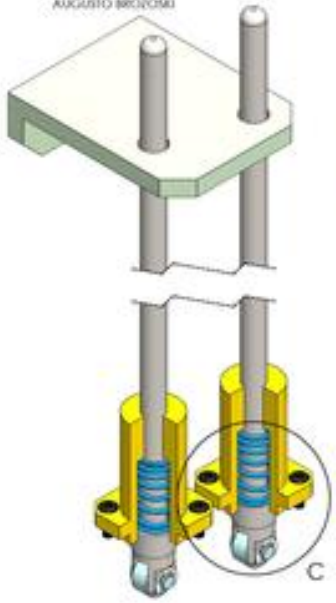
YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

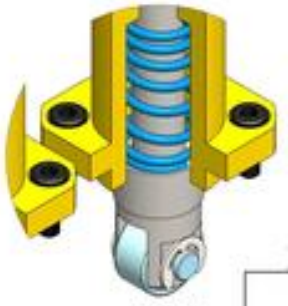






YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

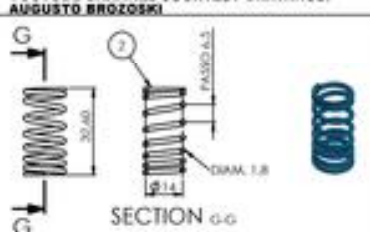


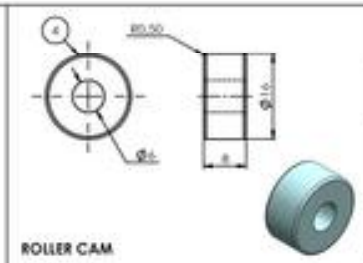


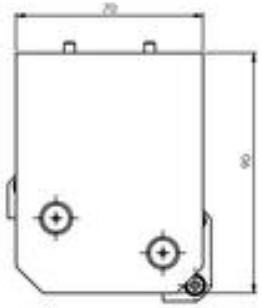
DETAIL C
SCALE 2:1

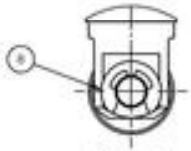
Nº DO ITEM	Nº DA PEÇA	DESCRIÇÃO	QTD.
1	SLEEVE CAM 5		2
2	COMPRESSION SPRING		2
3	FOLLOWER SHAFT		2
4	ROLLER CAM		2
5	SUPPORT CAM		1
6	B18.3.1M - 4 x 0,7 x 12 Hex SHCS – 12CHX		2
7	ROLLER PIN CAM		2
8	Lock washer DIN 6799 - 3		4
9	DIN 912 M4 x 10 — 10N		4
10	DIN 912 M4 x 10 — 10C		4

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

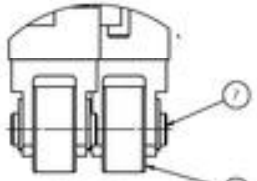




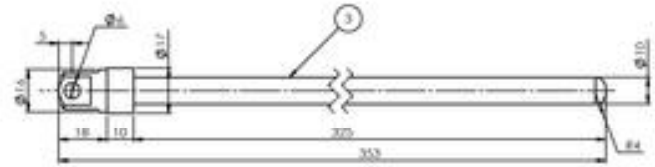


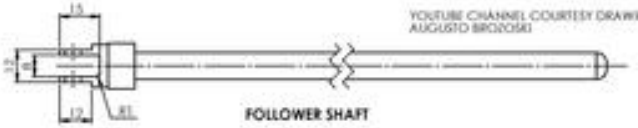


DETAIL B
SCALE 2:1



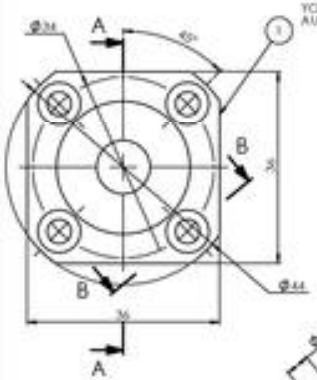
DETAIL A
SCALE 2:1



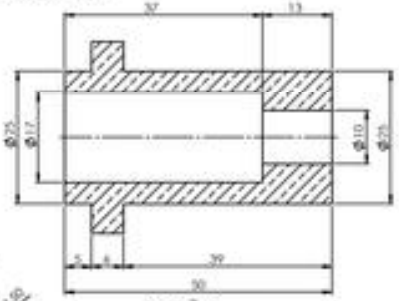


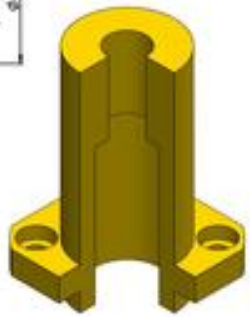
YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

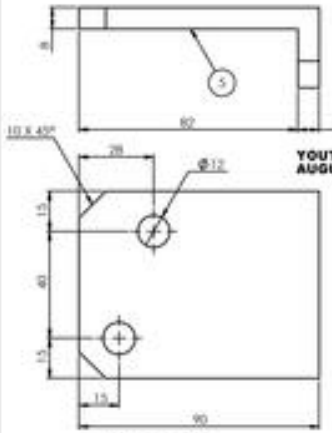
DETAIL F
SCALE 2:1



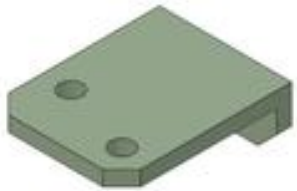
YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

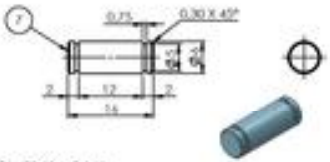






YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI





DESIGN FOR EDUCACIONAL USE ONLY

RADIAL ENGINE

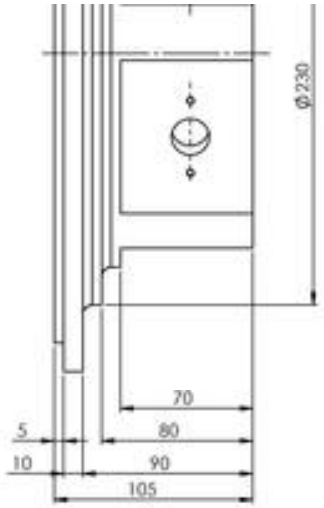
YOUTUBE CHANNEL COURTEST DRAWINGS:
AUGUSTO BROZOSKI

YOUTUBE CHANNEL COURTEST DRAWINGS:
AUGUSTO BROZOSKI

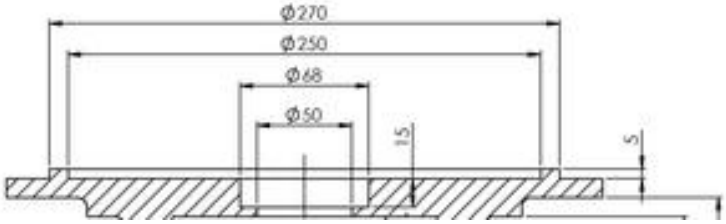
DESIGN FOR EDUCACIONAL USE ONLY

SE NÃO ESPECIFICADO: DIMENSÕES EM MILÍMETROS ACABAM. SUPERFÍCIE: TOLERÂNCIAS: LINEAR: ANGULAR:		ACABAMENTO:		REBARBAR E QUEBRAR ARESTAS AGUDAS		NÃO MUDAR ESCALA DO DESENHO		REVISÃO
	NOME	ASSINATURA	DATA			TÍTULO: RADIAL ENGINE		
DESEN.	AUGUSTO BROZOSKI							
VERIF.								
APROV.								
MANUF.								
QUALID.				MATERIAL:		DES. Nº 35 - CYLINDER HEAD GASKET		A3
				PESO:		ESCALA 1:1	FOLHA 1 DE 1	

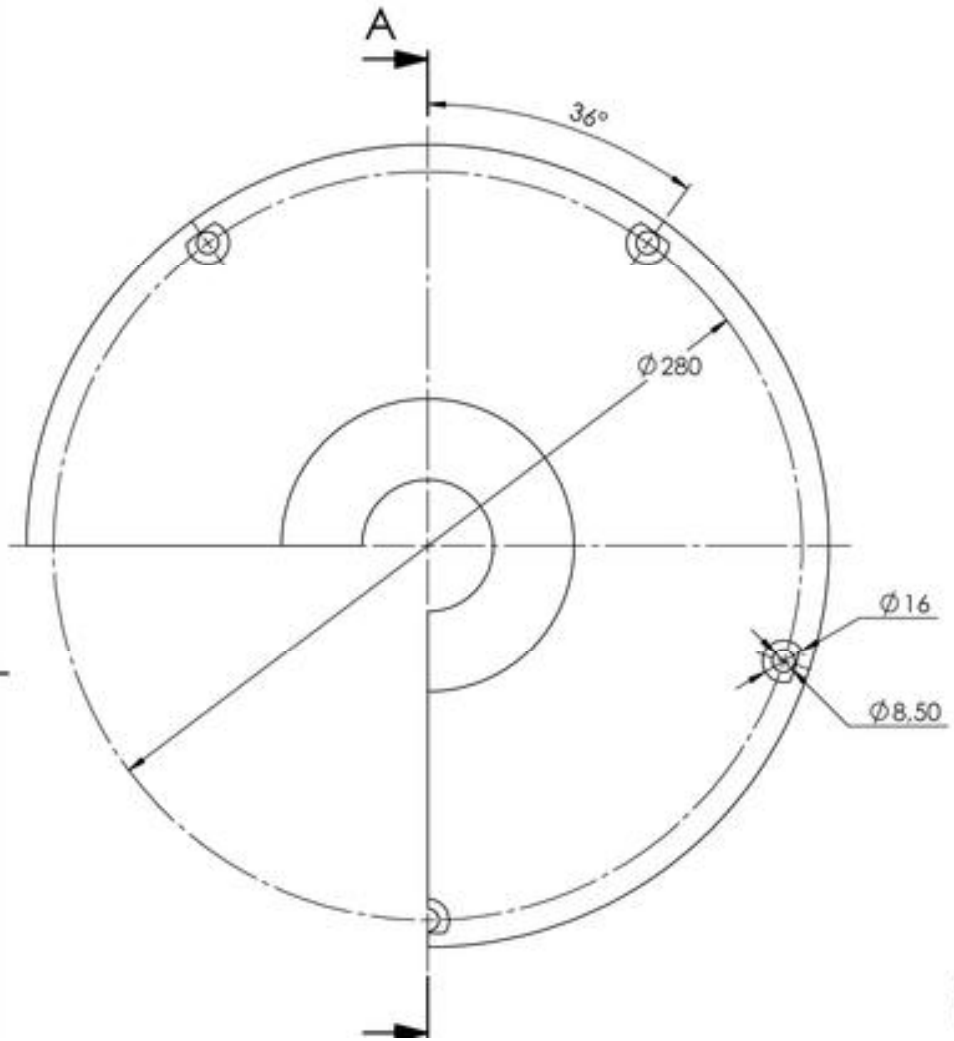
C B A

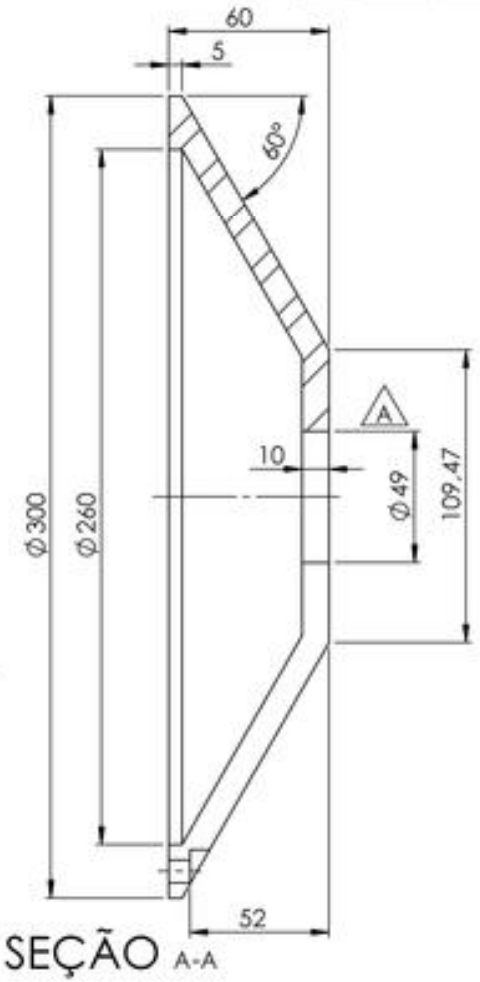


YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

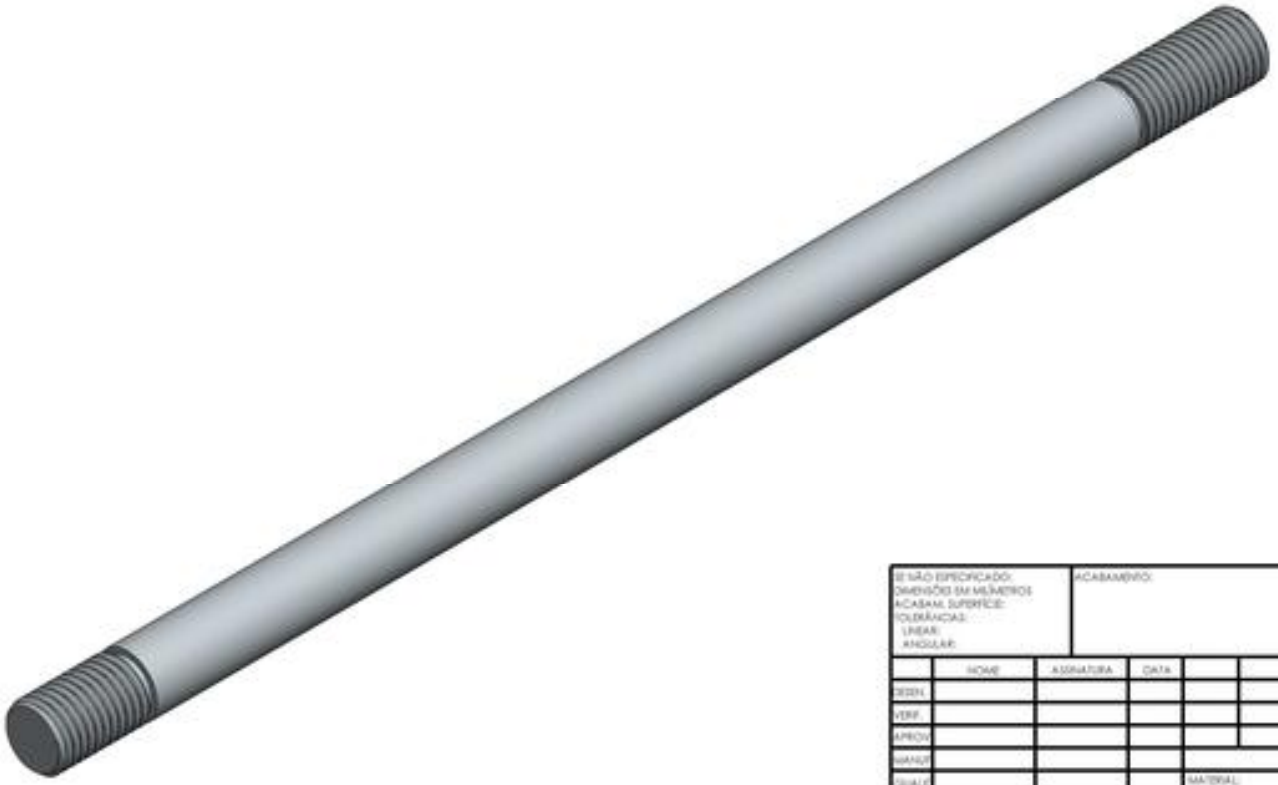


REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
D3	A	CHANGED HOLE FROM 42 TO 49	11/10/2019	AUGUSTO





SEÇÃO A-A



SE NÃO ESPECIFICADO: DIMENSÕES EM MILÍMETROS ACABAM. SUPERFÍCIE: TOLERÂNCIAS: LINEAR: ANGULAR:	ACABAMENTO:	REBARBAR E QUEBRAR ARESTAS AGUDAS	NÃO MUDAR ESCALA DO DESENHO	REVISÃO

	NOME	ASSINATURA	DATA
DESEN.			
VERIF.			
APROV.			
MANUF.			
QUALID.			

MATERIAL:

PESO:

TÍTULO:

RADIAL ENGINE

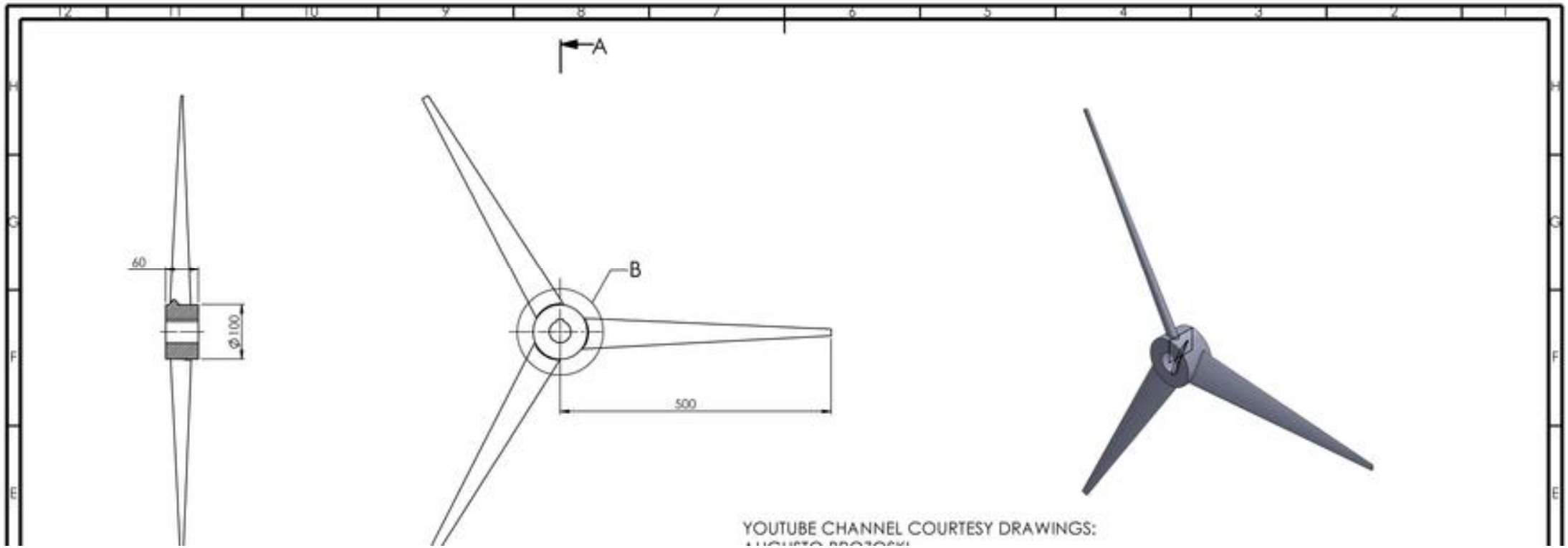
DES. Nº

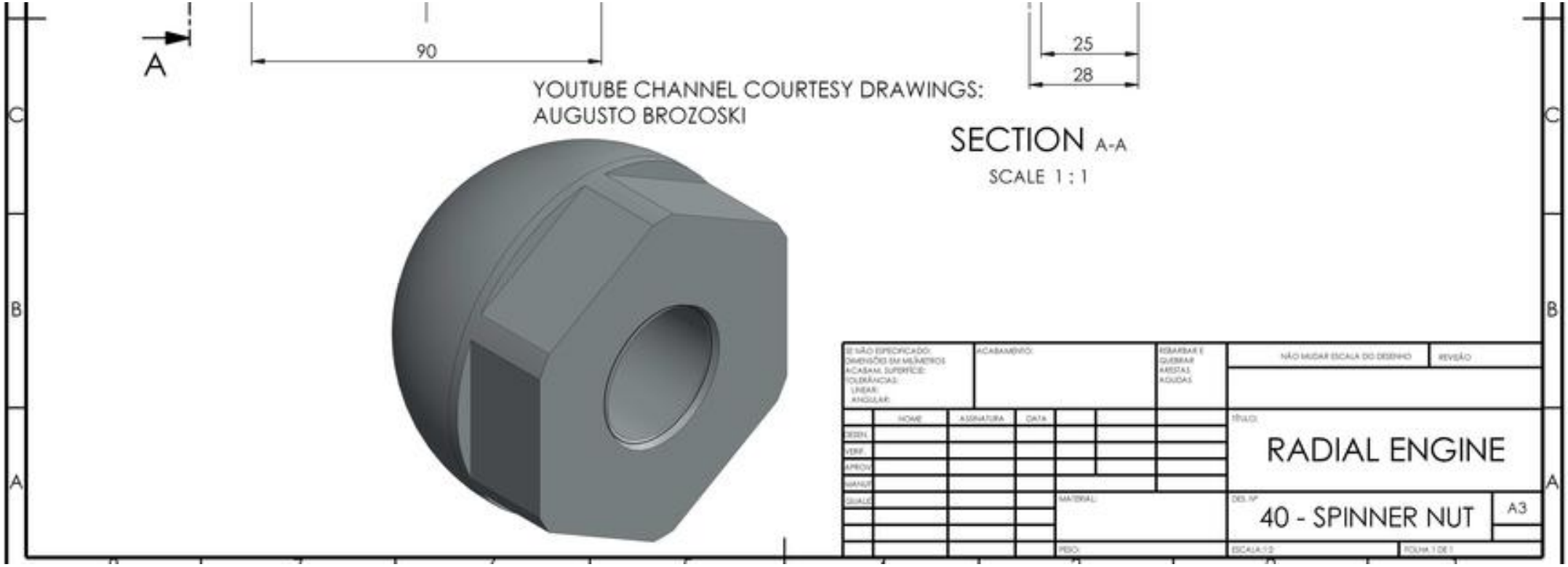
38 - STUD M16 x 320

A3

ESCALA 1:5

FOLHA 1 DE 1


A
60
Ø100
B
500
YOUTUBE CHANNEL COURTESY DRAWINGS:


A
90
25
28
YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI
SECTION A-A
SCALE 1 : 1
RADIAL ENGINE
40 - SPINNER NUT
A3

30,65

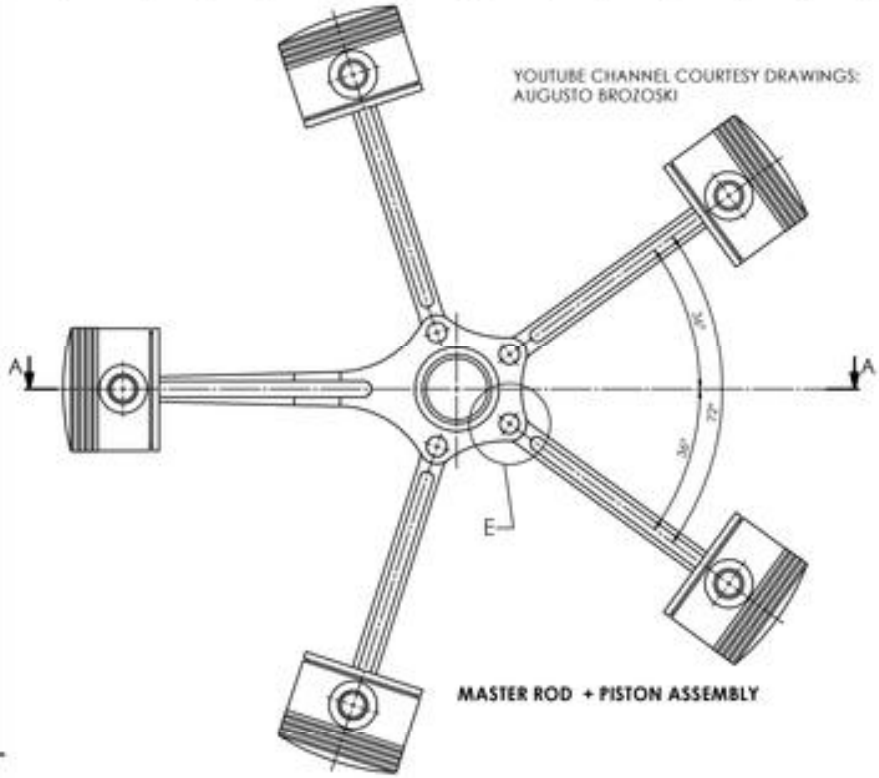
SECTION A-A

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

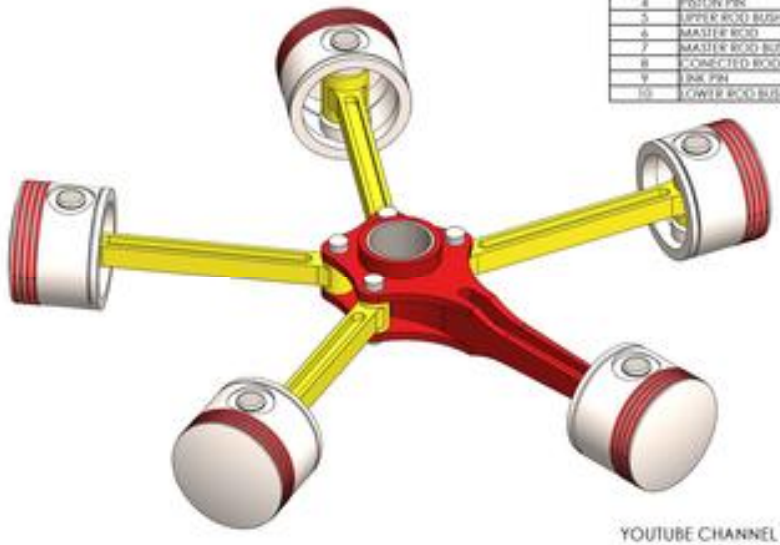
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:		FINISH:			DEBURR AND BREAK SHARP EDGES	DO NOT SCALE DRAWING	REVISION:
	NAME	SIGNATURE	DATE			TITLE: RADIAL ENGINE	
DRAWN	AUGUSTO BROZOSKI						
CHK'D							
APP'D							
MFG							
Q.A				MATERIAL:		DWG NO. 41 - SPACING HOUSING 30,65	A3
				WEIGHT:		SCALE:2:1	SHEET 1 OF 1

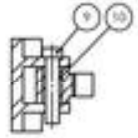
Nº DO ITEM	Nº DA PEÇA	Descrição	QTD.
1	PISTON		5
2	PISTON RING		20
3	PISTON PLUG		10
4	PISTON PIN		5
5	UPPER ROD BUSHING		5
6	MASTER ROD		1
7	MASTER ROD BUSHING		1
8	CONECTED ROD		4
9	LINK PIN		4
10	LOWER ROD BUSHING		4

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



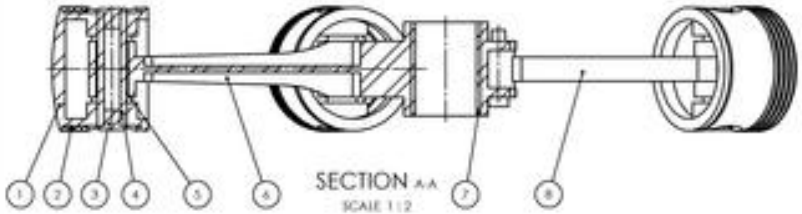
MASTER ROD + PISTON ASSEMBLY





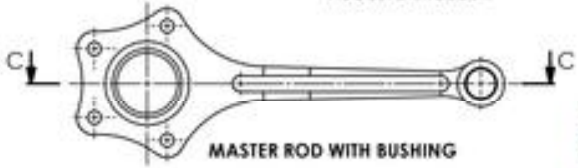
SECTION E-E
SCALE 1 : 2

DETAIL E
SCALE 1 : 2

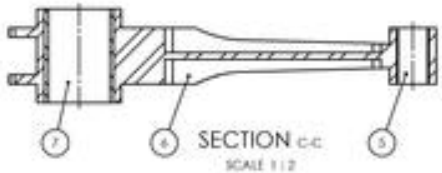


SECTION A-A
SCALE 1 : 2

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



MASTER ROD WITH BUSHING



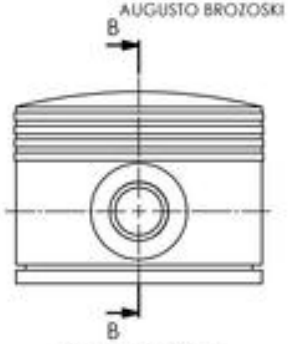
SECTION C-C
SCALE 1 : 2

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI

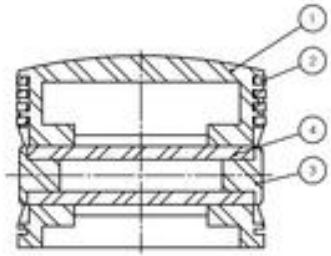
CONECTED ROD WITH BUSHING

SECTION D-D
SCALE 1 : 2

YOUTUBE CHANNEL COURTESY DRAWINGS:
AUGUSTO BROZOSKI



PISTON ASSEMBLY



SECTION B-B
SCALE 1 : 1

DESIGN FOR EDUCACIONAL USE ONLY

RADIAL ENGINE